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ABSTRACT

This report is a response to the request of President Johnson in Febraury of 1968 to "shape a long-term strategy of Federal aid to higher education, a comprehensive set of goals and a precise plan of action." Part I describes developments in the 60's which created the need for federal strengthening of postsecondary education. Part II delineates objectives for any program of federal aid to higher education: 1) to increase the number of level of educated people, 2) to equalize opportunities, and 3) to strengthen, encourage, and expand existing resources. Part III describes the present economic factors which influence the student population and explains factors in institutional finances. Part IV deals with special problems of graduate education. Part V discusses the relative merits and drawbacks of alternative forms of student and institutional aid. Part VI justifies priorities of programs and presents ten recommendations to achieve objectives. Over one half of this report contains appended data with primary emphasis on statistical tables relating to institutional finances, federal funding for higher education, and enrollments and graduations by ability and socio-economic status. (NF)

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Toward a Long-Range Plan for Federal Financial Support for Higher Education

A Report to the President

U.S. DEPARTMENT OF HEALTH, EDUCATION
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U.S. Department of
Health, Education, and Welfare
Office of the Assistant Secretary for Planning and Evaluation

THE SECRETARY OF HEALTH, EDUCATION, AND WELFARE
WASHINGTON, D.C. 20201

DEAR MR. PRESIDENT: January 6, 1969

In your education message of February 1968, you directed the Secretary of Health, Education, and Welfare to "begin preparing a long-range plan for the support of higher education in America." In response to your request, I am transmitting this report on a long-range plan for Federal financial support for higher education.

Yours will be remembered as an administration which looked squarely at the needs of education and acted boldly to meet them. The 1960's have seen an unprecedented increase in the Federal commitment to higher education—from $2.5 billion in 1963 to almost $6 billion in 1968. Clearly, America's colleges and universities owe much of their vitality and growth to such landmark laws as the Higher Education Facilities Act of 1963 and the Higher Education Act of 1965. The Higher Education Amendments of 1968 represent another major step in the strengthening of higher education.

Yet, despite this progress, many students are still prevented from entering and completing college by lack of funds. Moreover, there are many doubts about the future financial health of higher education, especially its ability to take on large numbers of additional students, and to bear the burden of paying for high-quality education at the graduate level.

Expenditures by institutions of higher education have increased from about 1.4 percent of the gross national product in 1960 to about 2.3 percent at the present time. It is essential that we make as our goal an increase to about 3.3 percent by 1976 in order that higher education may offer high-quality education to the 10 million young people who will be attending college at that time.

This report reviews the objectives of financial support for higher education, examines the financial barriers to meeting these objectives, and recommends a program of Federal action.

The report concludes that Federal aid to higher education in the future should emphasize two major national commitments:

—It should promote *equality of opportunity* by ensuring that all able students can afford to go on to postsecondary education, and that institutions are able to accommodate them.

—It should strengthen *graduate education and research* by providing support for graduate students and developing institutional capacity for graduate teaching and research at an increasing number of centers of excellence.

Enclosed is the summary of the nine major recommendations in the report.

One important long-run issue *not* resolved by the report is: Should higher education, like secondary education, be provided free of charge to all? Many believe that society as a whole benefits so much from having highly educated citizens that the full cost of higher education should be borne by the taxpayers. Others believe that the benefits of higher education to the students themselves are so great that they and their families should pay at least part of the cost.

Although this issue will continue to be debated in future years, it is clear that present public resources would not permit the establishment of a higher education system totally financed by the taxpayer. For the foreseeable future, we will have to rely on various sources of funds if we are to build and maintain a strong higher education system open to all. Funds from all sources must be increased to meet our objectives.

We must continue to rely on a variety of sources to help students pay the cost of higher education:

—Increased family incomes will make it possible and appropriate for many parents to make substantial and possibly increased contributions to the higher education of their children.

—Consideration of the benefits derived by industry and expanding corporate financial capacity will combine to support increased contributions from this source.

—The increased earnings higher education provides for students suggest that students themselves should be expected to pay part of the costs of their education out of these future earnings, and experiments should be continued with various long-term loan repayment methods.

But, there will still be many able students who cannot afford to pursue their education beyond high school unless the Federal Government expands its present student aid programs sufficiently to constitute a guarantee that all those who can do satisfactory postsecondary work will have the funds to go. This report recommends expanding and building upon existing programs such as the educational opportunity grants and the college work-study program. If the recommendations of the report were implemented, Federal aid would be available to the majority of college students who now come from families with annual income under $9,000 and to the thousands of potential college students from these families for whom the lack of financial aid presently creates a barrier to the pursuit of higher education. The number of students receiving Federal grants and loans would increase from the present 1¼ million to more than 6 million by 1976.

The national interest demands that public student financial aid be directed primarily to those individuals who otherwise would not attend college. It should be given where it is needed most, where it permits an individual to pursue higher education who, without aid, could not have done so.

Equality of opportunity in higher education is an empty goal unless colleges and universities have the resources to provide high-quality education to those who enroll. Part of these resources must come from tuition and fees, part from State and local government, part from private giving. But these resources alone will not be sufficient. The Federal Government must also increase its aid directly to institutions to augment the resources available to these institutions.

It seems particularly appropriate and necessary for the Federal Government to expand three kinds of institutional aid:

1. Cost-of-education allowances paid to institutions which enroll federally aided students.
   The report recommends enactment of cost-of-education allowances for undergraduate student aid programs and increases in such allowances already paid at the graduate level.
2. Aid for graduate education and research.
   Specialists with graduate degrees and the research which they make possible are a national resource. States and individual institutions cannot afford to provide this costly resource for the Nation as a whole. The Federal Government must take an increasingly larger financial role in this area. The report recommends a variety of ways of strengthening graduate education and research and increasing the number of centers of excellence.

3. **Aid for the capital cost of institutional expansion.**

   New and expanding institutions and those which must replace deteriorating plant and equipment need special help. Federal funds are now available under a variety of programs for construction and equipment. The report recommends consolidation of these programs to give institutions more flexibility in using these funds in accordance with their own plans and priorities.

At the present, all Federal aid for higher education (excluding research) is about $3.7 billion a year. The recommendations in this report would by 1976 increase this total to about $11 billion.

In the future, other types of Federal aid may be necessary, perhaps including institutional aid to colleges and universities on a formula basis. It seems more important now to devote available Federal funds to expanding student aid and to the three specialized forms of institutional aid listed above. Further consideration of other types of institutional grants is, of course, not foreclosed. However, much is still to be learned about the impact of formula aid on the quality of higher education, on the balance between public and private colleges, and on the maintenance and growth of support by State and local governments. Congress should be encouraged to continue its examination of all kinds of institutional grants and see if a plan can be formulated which merits support.

Respectfully yours,

Wilbur J Cohen

Secretary.

The President,
The White House,
Washington, D.C. 20500

Enclosure.

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SUMMARY OF MAJOR RECOMMENDATIONS

A. Improving Equality of Opportunity

Although a high proportion of American young people obtain a higher education, this opportunity is unequally distributed. The report finds that students with the same level of achievement in high school are far less likely to attend college if they come from a low-income family than if they come from a middle-class background. Lack of funds, not lack of ability, is preventing many students from entering and completing college.

1. *Recommendation:* A major expansion of Federal grants for needy and lower middle-income students. This program would assure every student with the ability sufficient funds to pursue a postsecondary education. The recommended program would provide almost half of all full-time students with some grant-in-aid. The amount of aid would depend on a student's family income, but more liberal "need criteria" would greatly broaden the base of federally-aided students.

In addition, equalization of opportunity can be enhanced through fuller funding of the Developing Institutions Program (Title III HEA of 1965) and the newly enacted program of Special Services for Disadvantaged Students.

Loan funds must also play an important role in student financing. They supplement grants to low-income students and enable middle- and upper-income students and their families to spread the heavy cost of higher education over a period of years.

2. *Recommendation:* A national student loan bank to remedy deficiencies in present Federal loan programs. The bank would make long-term loans to students and ensure a larger supply of capital on easier terms in order to allow all students to supplement family contributions, work-study, and scholarship funds. The bank would provide an assured flow of funds regardless of geographic location of students or money market conditions in the economy.

B. Improving the Quality of Higher Education

While it is difficult to define "quality" precisely in higher education, it is clear that increasing the effectiveness of the higher education offered to students necessitates increasing the resources available to institutions to attract qualified faculty and to improve facilities, libraries, and teaching methods.

While the report does not find evidence of an imminent "crisis" in higher education finance, there is clearly a need for increasing the flow of Federal resources to higher educational institutions in the future, and ensuring that the institutions bearing the burden of rapid increases in enrollment (which would be accelerated by the recommended programs of student aid) have the resources necessary to provide quality education for this increasing body of students.

3. *Recommendation:* A cost-of-education allowance should be paid to institutions accepting students aided under the grant program. These funds could be spent at the discretion of the institution to improve the quality of its education. This form of institutional aid would be of most benefit to institutions which were rapidly expanding and which were carrying the burden of educating a high proportion of low-income students.

Improving educational quality takes more than money. There is also a need for a new focus on improving the quality of teaching.

4. *Recommendation:* A new project grant program to support experiments to improve the quality of undergraduate teaching, and to devise new institutional programs designed to emphasize the importance of teaching.

C. Improving Graduate Education and Research

The Federal Government has a particular responsibility for strengthening the Nation's capacity to produce highly trained specialists in all fields and to advance knowledge through research. The report finds that although Federal support has contributed greatly to the strengthening of research and graduate education in recent years, this support itself has led to some imbalances and difficulties. Institutions need some discretionary funds to provide support for younger researchers, for development of new fields of study, and for redressing some of the imbalances between classroom teaching and research and between science and other disciplines.

5. *Recommendation:* A substantial expansion of NDEA graduate fellowships and an increase in cost-of-education allowances attached to all Federal fellowships. These increases will permit graduate institutions to provide a more balanced program of graduate student support and will enable them to fund research and curricular projects at their own discretion.

6. *Recommendation:* Expanded funding for existing NSF, NIH, and OE institutional grants to speed the development of new centers of excellence at the graduate level, and establishment of a similar

program under the National Foundation on the Arts and the Humanities.

7. *Recommendation:* To supplement existing research programs, a program of "sustaining grants" equal to a percentage of Federal research awards received by institutions of higher education. These grants would be completely untied; institutions could use them for research or teaching purposes, thus broadening the range of meaningful decisions made at the university level.

D. Encouraging Wise Use of Resources by Institutions

All of the other goals can be met more effectively if resources in higher education are used efficiently, if waste is reduced, and if obsolete practices are eliminated. In general, the institutions themselves are the best judges of what they need to serve students effectively. Federal aid on a project basis or tied to particular types of expenditures may be ineffective in meeting the most urgent needs of particular institutions.

8. *Recommendation:* Existing programs for construction and equipment purchase in several Federal agencies should be consolidated so that institutions would be given a block allocation of funds, the detailed uses of which would reflect the particular needs of the recipient institution.

9. *Recommendation:* A program of grants to institutions for planning and evaluation of the functions and operations of the institution to improve the efficiency of resource utilization.

In addition, the recommended institutional aid in the form of cost of education allowances and "sustaining grants" will provide institutions with substantial additional resources to be used at their discretion.

Costs and Priorities

The program outlined in the accompanying report would grow to $6.3 billion per year in additional funds by fiscal year 1976. Other Federal programs (excluding research) for higher education would add at least another $1 billion.

About $4 billion of this total is attributable to the expanded Federal grants for needy students program, and the cost-of-education allowances of that program. This is, by far, the item of highest priority in our recommendations.

ACKNOWLEDGEMENTS

The report was prepared under the direction of Alice M. Rivlin, Assistant Secretary for Planning and Evaluation of the Department of Health, Education, and Welfare. Dr. Rivlin chaired an advisory committee consisting of:

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Harold Howe II, Commissioner of Education, Department of Health, Education, and Welfare

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Philip R. Lee, Assistant Secretary for Health and Scientific Affairs, Department of Health, Education, and Welfare

Robert Q. Marston, Director, National Institutes of Health

The group met frequently for lively discussions. All members contributed ideas, advice and help with successive drafts. The report represents a consensus of this group, although individual members do not necessarily agree with all specific recommendations in detail.

Dr. Jeffrey Weiss carried the burden of the staff work for the report. He received considerable assistance from Robert Hartman, David Mundel, Michael Clurman, and Robert Berls. Mancur Olson, Deputy Assistant Secretary for Social Indicators, and Samuel Halperin, Deputy Assistant Secretary for Legislation, also made substantial contributions to the work. Mrs. Joyce McNeil efficiently and conscientiously typed the several drafts of this report.

The National Center for Educational Statistics assisted by speeding the processing of the latest data on higher education finances. Both the Educational Testing Service, Princeton, New Jersey, and the Institute for Defense Analyses, Arlington, Virginia, made important contributions through their empirical work on quality in higher education and the demand for higher education, respectively.

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I. The Need For a Plan

The 1960's have been a period of tremendous growth for American colleges and universities.

Enrollment has risen rapidly. Between 1960 and 1970 it is estimated:

—Total enrollments will have more than doubled, from 3.5 million to over 7 million.

—Enrollments in 2-year institutions will have increased almost three-fold.

—Graduate enrollments will have risen from 356,000 to about 800,000, and the number of doctoral degrees awarded from about 10,500 a year to about 25,000.

Expenditures for higher education have increased even faster than enrollments:

—Total expenditures on higher education will rise from $6.6 billion in 1960 to an estimated $20 billion in 1970.

—The proportion of GNP devoted to higher education will have risen from 1.4 percent to about 2.3 percent.

Federal programs affecting and supporting higher education have increased in number and importance. These were years of landmark legislation for higher education. The Higher Education Facilities Act of 1963 and the Higher Education Act of 1965 are among the most significant legislative accomplishments of the decade. The Higher Education Amendments of 1968 have substantially strengthened and broadened Federal support.

Federal funds for higher education purposes increased from about $2.5 billion in fiscal year 1963 to almost $6 billion in fiscal year 1968. Among these programs:

—Aid for facilities and equipment increased from $331 million to $986 million.

—Institutional and training grants rose from $281 million to $678 million.

—Undergraduate student support from the Office of Education increased from $91 million to $494 million.

—Student support by Veterans Administration and Social Security increased from $68 million to $844 million.

The Federal Government has never developed an explicit strategy for the support of higher education. Although Federal involvement is large, accounting for 21 percent of higher education's expenditures (including research), its multiple programs have grown in response to specific needs of particular kinds of students or of institutions or of the Federal Government itself. No real attempt has been made to define an appropriate role for the Federal Government in the financing of higher education.

The higher education community is increasingly concerned that the Federal Government has not designed an explicit strategy for supporting higher education. Moreover, most of those concerned with higher education believe that colleges and universities will have increasing difficulty in the future in meeting their growing needs from State, local and private sources. They believe the Federal Government must play a new role in higher education finance if colleges and universities are to continue to offer improving education to a growing student body. They are not agreed, however, on exactly what that role should be.

President Johnson in his education message of February 1968 recognized that it was time to begin to "shape a long-term strategy of Federal aid to higher education, a comprehensive set of goals and a precise plan of action." He therefore directed the Secretary of Health, Education, and Welfare to "begin preparing a long-range plan for the support of higher education in America."

This report is in response to the President's request. It is an attempt to provide answers to the following questions:

1. What should be the objectives of Federal support for higher education?

2. What are the most urgent financial problems confronting the Nation in higher education?

3. What major alternative types of support should be considered, and what are the advantages and disadvantages of each?

4. What are the highest priority programs for the Federal Government to undertake and expand?

The report addresses itself to the Federal Government's role in the general strengthening of postsecondary education. It does not deal in detail with specialized types of manpower or the needs for particular kinds of professional training (e.g., medicine and dentistry). It does not assess the present quality of higher education. Nor does it deal with the desirable level of Federal spending for research in higher education institutions.

Moreover, the report is not so long-range that it looks forward to a period in which Federal resources for higher education are freely available. It assumes that there will continue to be many competing demands on a limited Federal budget, and that it is therefore necessary to choose the highest priority uses of these funds to meet national objectives.

II. Objectives of Federal Support of Higher Education

The first step in evaluating possible alternative Federal plans for aid to higher education is to ask the question: Toward what national objectives should a plan for higher education be directed? The following is a list of fundamental objectives to which any Federal plan for aid to higher education should contribute:

1. *Increasing the number and proportion of educated people*

The increasing technological and social complexities of our society demand a larger number of educated people. Moreover, a larger and larger proportion of Americans aspire to education beyond the high school. Although many other countries restrict opportunities for higher education to a small proportion of the population, it is in the American tradition to expand the proportion of young people receiving higher education.

2. *Increasing equality of opportunity for higher education*

Higher education has always been an important avenue to social, intellectual, and economic advancement of individuals. The time has come for the Federal Government to guarantee that *every* student with the ability to pursue a higher education should be able to do so regardless of his income, race, or place of residence.

3. *Improving the quality of higher education*

While it is difficult to define precisely what is meant by "quality" in higher education, one way to increase the effectiveness and relevance of the higher education offered to students is to increase the resources available to institutions to attract qualified faculty and to improve facilities, libraries, and curricula.

4. *Preserving diversity in higher education and advancing institutional autonomy and academic freedom*

Higher education institutions must be free to experiment, innovate, and set their own academic standards. Moreover, a pluralistic system of higher education (including institutions of varying size, character, support and philosophy) contributes to the vitality of higher education and widens the choices available to students.

5. ***Strengthening graduate education and institutional research and the public service capabilities of higher educational institutions***

Creative scholars and highly trained specialists are a national resource. The continued strengthening of graduate education and research capability in colleges and universities is of particular national importance, and deserves special emphasis by the Federal Government.

6. ***Encouraging the efficient use of resources in higher education***

All of the above goals can be met more easily if resources are used efficiently and effectively, if waste is reduced, and obsolete, inefficient educational practices are eliminated.

These objectives are often conflicting. They all require scarce resources. Greater emphasis on one objective may mean less resources for others. For example, continued expansion of the higher education system to accommodate increasing numbers of students who wish to obtain a higher education may conflict with improving the average quality of higher education. A program of institutional aid emphasizing institutional autonomy might conflict with efficient use of educational resources. A program designed to aid the most able potential college students might well conflict with equality of opportunity, since the poorest groups in society are underrepresented in the highest achievement groups as measured by test scores. Similarly, the goal of advancing graduate education might imply a program giving aid mainly to our strongest universities and might conflict with the goal of raising the quality of higher education in general.

III. The Present State of Higher Education

In order to evaluate alternative Federal approaches to meeting these objectives we need some facts about the current state of higher educational finance. This section attempts to throw some light on three relevant questions:

1. How great are the financial bariers to equality of opportunity for higher education?
2. What can be said about the financial health of higher education and the outlook for the future?

3. Are there special fiscal problems at the graduate level which require Federal attention?

OPPORTUNITY FOR HIGHER EDUCATION

In 1965–66, almost 900,000 or 35 percent of the 2.6 million high school graduates entered college in the year of high school graduation. An estimated 46 percent or 1.2 million will have entered college within 5 years of graduation. Probably very few will enter after that.

Who Goes to College?

College attendance is highly determined by income and the other factors which may be described as the "socioeconomic status" (SES) of families of high school graduates.[1] Thus, among students in the top

TABLE 1

Who goes to college within 5 years after high school graduation[a]

SES	*Number high school graduates in group*	*Number who enter college*	*Number not entering college*
Achievement group one; top 20 percent:			
1. High	203, 000	192, 000 (95%)	11, 000 (5%)
2.	153, 000	120, 000 (79%)	33, 000 (21%)
3.	122, 000	82, 000 (67%)	40, 000 (33%)
4. Low	60, 000	30, 000 (50%)	30, 000 (50%)
Totals	538, 000	424, 000 (79%)	114, 000 (21%)
Achievement group two; next 20 percent:			
1. High	130, 000	109, 000 (84%)	21, 000 (16%)
2.	143, 000	90, 000 (63%)	53, 000 (37%)
3.	148, 000	78, 000 (52%)	70, 000 (48%)
4. Low	94, 000	34, 000 (36%)	60, 000 (64%)
Totals	515, 000	311, 000 (60%)	204, 000 (40%)
Grand total	1, 053, 000	735, 000 (70%)	318, 000 (30%)

	SES 1 (high) Percent	*SES 2 Percent*	*SES 3 Percent*	*SES 4 (low) Percent*
For both achievement groups:				
College	90	71	59	42
No college	10	29	41	58

[a] These calculations are based upon data from *Project TALENT*. Enrollment figures are for degree credit enrollment.

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[1] The estimates in this section are based primarily upon data from ***Project TALENT***, a longitudinal survey sponsored by the U.S. Office of Education. These data refer to the high school classes of 1960 and 1961 and their experiences from 1960 to 1966. Additional information on the attendance patterns of these students is presented in App. A.

20 percent of achievement, as measured by test scores, 82 percent of those in the highest SES quartile enter college in the year following high school while only 37 percent of the students in the lowest SES quartile will enter college that year. A similar differential enrollment pattern holds at each achievement level of students.

In fact, students from the highest 20 percent achievement group but from the lowest SES quartile have a *lower* likelihood of entering college in the year after high school graduation than students in the next-to-lowest achievement group from families in the highest SES quartile.

The effect of the socioeconomic status of families on college attendance is shown in table 1. This table indicates the estimated number and percentages of 1965–66 high school graduates who will attend college, by SES, for the two achievement groups comprising the top 40 percent in high school academic achievement. It shows who enters college within 5 years after high school graduation.

It is clear that there is a significant loss of academically able students who do not enter college because of the SES of their families. Students in the lowest half of the SES distribution have a significantly lower prospect of entering college than their higher-income counterparts of equal achievement. Also, they are less likely to place in the top 40 percent achievement group in high school. About 60 percent of the students in this achievement group are from families in the top half of the SES distribution.

Once a high school student enters college, income and cultural deprivation are less important than before entrance to college. While SES does have some effect on the prospects of obtaining a degree within 4 years, the impact is not nearly as significant as the effect of SES on college entrance.

Socioeconomic factors also have considerable influence on entrance to graduate or professional school. A college freshman from the highest 20 percent achievement group and top SES quartile has a 42 percent likelihood of going on to a graduate or professional school. But a freshman from the *same* high achievement group, but the lowest SES quartile, has only a 20 percent likelihood of entering graduate or professional school.

The cumulative effect of SES is strikingly illustrated by the relative prospects of students from the same top 20 percent achievement group, but from the lowest and highest SES quartiles, entering graduate or professional school as viewed from the third year of high school. High school juniors in the highest SES quartile have *five* times the likelihood of entering graduate or professional school as their lower income counterparts. Much of this difference is accounted for by the effect of SES on college entrance of high school graduates.

Given the impact of SES on college attendance, it is not surprising to find that the college attendance rate for nonwhites of college-going age is less than half the rate for whites. It is surprising to note that the college attendance rate for nonwhite *high school graduates* is about 80 percent of the white rate, even though nonwhite high school seniors have family incomes much lower than white seniors. Furthermore, surveys indicate that a higher proportion of nonwhites than white seniors plan to enter college, indicating that nonwhites are strongly oriented toward college as a means of social and economic advancement.

The Impact of Student Aid on College Attendance

The above data show that income levels of high school graduates are closely related to their prospects of entering and completing college. It is difficult to estimate however, how much change in enrollment of low income students would be brought about by a given increase in student aid. There are cultural and motivational as well as financial barriers to college attendance among lower income groups.

In the absence of major experiments with the impact of different forms and levels of student aid, it is necessary to make guesses based on analysis of the present behavior of students from different income levels facing varying prices for higher education. An analysis of the factors affecting enrollment in higher education was undertaken for this report in order to provide some basis for estimating the probable enrollment effects of varying levels of student aid.[2] While the estimates resulting from this analysis are subject to considerable error, the analysis indicates that college enrollment is highly responsive to changes in cost to the student. It is estimated that a $500 subsidy offered to all high school graduates in the lowest half of the income distribution would increase first-year enrollment for this group by over 25 percent in 2 years. Moreover, the proportion of students from this group attending junior colleges would fall relative to the proportion attending 4-year colleges.

There is some evidence that changes in the cost of college have a greater impact upon college attendance if these changes are made known to students early in their high school careers. If there were a fundamental improvement in the method of financing students' education, it is likely that the long range impact of this change would be to remove some of the barriers to college attendance which we identify as "motivational" in the short-run.

Adequacy of Federal Aid for Undergraduates

Federal aid to undergraduates has expanded tremendously since 1963. The educational opportunity grant program, NDEA loan program, guaranteed loan program, and college work-study program now provide some aid for one out of every four undergraduates, or about 1.25 million students.[3] Nevertheless, despite an estimated $300 million in undergraduate scholarships now provided by non-Federal sources, Federal aid for undergraduates is far from adequate to insure access to college for all persons capable of acquiring a college education. The present level is not even adequate to meet the needs of those students who are eligible under the rather stringent need criteria used to allocate funds under the existing Federal "scholarship" program—educational opportunity grants.

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[2] For a brief description of the findings of this study see App. B.

Within the basic structure of existing programs, the current educational opportunity grant and college work-study programs contain these drawbacks:

1. The planned level of funding for fiscal year 1970 ($330 million) is too low to meet the demand by colleges for opportunity and work-study grants.

2. The maximum amount of the opportunity grant is too low (currently $1,000). By 1970, average tuitions will have risen about 50 percent since the program was first enacted in 1965.

3. Schools are not allowed to transfer funds from the work-study program to the educational opportunity grant program. This forces schools to give some students work-study funds when academic considerations would have led them to use opportunity grants if funds were transferable.

Moreover, these programs contain a more fundamental limitation which cannot be removed without changes in their structure: They do not dramatically and clearly indicate that the Federal Government has established a policy of removing financial barriers to college attendance. Under existing programs lower income students must first apply to specific schools in order to try to qualify for aid, yet we know that high school performance (and graduation) is affected by students' perceptions of college costs while they are still in the early grades of high school.

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[3] The educational opportunity grant program provides low-income students with grants of up to $1,000 per academic year. Approximately 290,000 students now receive this form of aid from over 1,800 institutions.

The NDEA loan program provides low-interest loans to financially needy students, with cancellations for students who go on to teach. Over 400,000 students will receive loans under this program in fiscal year 1969, with the average loan equal to $600.

The guaranteed loan program provides for Federal insurance and partial Federal subsidy of student loans made by private financial institutions. The program was established to ease the financial burden of families who do not qualify for the NDEA loan program. In fiscal year 1969, over $600 million in new loans will be made to over 700,000 students.

The college work-study program was established to stimulate the part-time employment of students, particularly those from low-income families, by having the Federal Government pay 80 percent of student wages. Almost 400,000 students have been earning an average annual amount of $450 under this program.

The above figures on the number of students aided by these four programs is considerably larger than the total number aided, since many students are assisted by more than one Federal program.

Furthermore, the two major Federal programs for student loans, the national defense student loan program (NDSLP) and the guaranteed student loan program (GLP) have the following disadvantages.

1. The sources of funds are too volatile to provide stable and dependable support. In tight budgets, the NDSLP suffers. With tight money markets, the GLP cannot ensure a smooth flow of funds.

2. The terms of repayment on the loans are too rigid. Restricting repayments to 10–15 years may constitute an important bias against educational investment.

3. The collection costs and delinquency rates of these programs are unnecessarily high. The delinquency rate exceeds 10 percent on the NDSLP primarily because of the mobility of former students. For both NDSLP and GLP, institutions are faced with small loans requiring frequent billing.

4. Students are treated unequally under the GLP. This program has been unsuccessful in providing funds for lower income students, Negro students, rural students from the midwestern States, and out-of-State students. In short, the program suffers from the lack of a broad national perspective.

Adequacy of Graduate Student Aid

Federal funds aided about 140,000 graduate students in fiscal year 1968, through a combination of fellowships, traineeships, and research assistantships. This amounts to 40 percent of the estimated full-time graduate enrollment in the United States. Another 10 percent of all full-time graduate students are supported by non-Federal stipends. Thus, since graduate student aid is generally given on the basis of ability rather than need, in most fields it is unlikely that a significant number of very capable college graduates fail to enroll at the graduate level because of an inadequate level of graduate student support.

Nevertheless, the number of graduate fellowships needs to be expanded quite rapidly in the 1970's if the present proportion of graduate students supported is to be maintained. Full-time graduate enrollments are expected to grow at an annual rate of 6–7 percent and the recent slackening in Federal research support has reduced the proportion of graduate students supported by research assistantships.

Moreover, there are significant differences among fields in the extent of graduate student support. Very able students in some fields teach part-time to support themselves while relatively less capable graduate students in fields with more generous levels of Federal support can pursue their studies full-time. For example, the proportion of graduate students with Federal fellowships is nearly twice as high in the physical sciences as the proportion in the arts and humanities.

THE INSTITUTIONAL FINANCIAL PICTURE

A recent report of the Association of American Universities asserts: "American higher education is experiencing critical and widespread financial pressures." This view is widely held by university administrators. What do the statistics tell us about the nature and extent of these financial pressures?

Recent Trends in Institutional Finances

The most recent comprehensive data on higher education finances are those made available for this study by the National Center for Educational Statistics. We have examined trends in institutional finances over the 6-year period 1959–60 to 1965–66 (the most recent year available).[4]

During this 6-year period institutions of higher education absorbed an enrollment increase of more than 2 million students—an average annual increase of 8.6 percent. This fact alone has clearly exerted considerable "pressure" on those responsible for raising revenues for higher education. Moreover, because of two important characteristics of higher education finance it is necessary to increase revenues over time even faster than enrollment, just to "stand still." The first characteristic is the major importance of wages and salaries in the budgets of all institutions of higher education—wages and salaries make up about 60–70 percent of institutional costs. The second characteristic is the comparatively small increases in "productivity" per employee which have occurred in higher education compared with other sectors of the economy. There do not seem to have been any major technological breakthroughs in recent years which have permitted professors to increase their effectiveness in teaching large numbers of students. Given these two characteristics, income per student must rise over time if the salaries and wages paid to the faculty and other employees of institutions of higher education are to keep pace with salary increases in other sectors of the economy. Furthermore, because higher education is a rapidly expanding sector of the economy, it would be anticipated that salaries would increase somewhat faster in higher education than elsewhere in order to attract the large number of new faculty required for rapid expansion. From 1959–60 to 1965–66, this was in fact the case as faculty salaries increased by about 5.5 percent per year while wages generally increased by about 4 percent per year.

Thus, since faculty salaries increased by about 5.5 percent annually, and other prices increased less than 2 percent per year, income per student enrolled in institutions of higher education would have had to increase by 4–4.5 percent annually in order to maintain faculty and other institutional resources per student.

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[4] **See App. A for additional data on institutional finances.**

The statistics indicate that, in the aggregate, institutions of higher education managed to increase their revenues per student even faster than this. For all institutions, revenues per student increased at an average annual rate of 5.5 percent during the period 1959–60 to 1965–66.

There was a marked disparity in the rates of increase in revenues per student in public and private institutions, with public institutions' revenues per student increasing 4.0 percent annually while the comparable rate of increase for private institutions was 8.1 percent. Therefore, the income per student gap between private and public institutions widened.[5] Revenues per student at both public universities and public colleges increased at half the annual rate of their private counterparts.

In both public and private institutions revenues per student from tuition and fees increased somewhat faster than total revenues per student. The proportion of total institutional revenue accounted for by student charges (tuition and fees plus revenue from auxiliary enterprises) increased slightly. In 1965–66, these revenue sources supplied about 28 percent of the total revenue of public institutions, and about half the revenue of private institutions.

Per student revenue from tuition and fees increased faster at private institutions than public institutions (9.1 percent vs. 7.4 percent per annum), contributing to the widening gap in total revenues per student. Nontuition sources of revenue in private institutions also grew rapidly. In fact, revenues per student in private institutions would have grown at the same rate as public institutions, even if the private institutions had not raised tuition at all.

Thus, it is the *public* institutions, rather than their private counterparts, which have experienced a *relative* decline in revenue per student in the recent past. Although 4-year private institutions' share of total enrollments in 4-year institutions declined from 45 to 38 percent from 1959 to 1966, the fraction of the total income of 4-year institutions accounted for by private 4-year institutions hardly declined—it went from 45 to 44 percent. Moreover, the relative increase in private institutions' revenue per student was not due to an increase in the proportion of graduate students in private as opposed to public institutions. The ratio of graduate students to total students increased slightly faster at the public institutions.

Another important trend during this period was the increased reliance of all types of institutions on Federal funds, and the relative decrease in endowment earnings and private gifts and grants as revenue sources. By 1965–66, Federal funds accounted for 21 percent of the total revenue of institutions of higher education. And Federal funds (mainly for research) were a particularly important source of revenue for universities. They accounted for 31.6 percent of the revenue of private universities in 1965–66 and 23.6 percent of the revenue of their public counterparts.

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[5] In 1965–66, current income per student at public institutions was $2,040 and the comparable figure for private institutions was $2,840.

Faculty Salaries and Faculty-Student Ratios

Faculty salaries have increased somewhat faster than wages and salaries generally in recent years. From 1959 to 1966 they increased at an average annual rate of 5.5 percent. Salaries at private and public institutions increased at about the same rate.

In contrast, the faculty-student ratio in public institutions decreased from 1956 to 1966, but private institutions managed to improve their faculty-student ratios. Furthermore, the proportion of faculty with Ph. D.'s increased substantially from 1956 to 1966. However, there was a slight decline in this ratio from 1963 to 1966 as undergraduate enrollments rose very rapidly. This decline in the proportion of faculty with Ph. D.'s was borne entirely by public institutions.

Given the disparity in revenue growth per student between public and private institutions, it appears that public institutions were able to maintain salary differentials with private institutions only by accepting a *relative* decline in their faculty resources per student.

Trends in Capital Revenues and Expenditures

In the face of a two-thirds increase in enrollments from 1959–60 to 1965–66, annual additions to plant and equipment increased from $1.3 billion to $3.2 billion.

The Federal share of receipts for capital expansion and modernization increased significantly from 4.4 percent in 1959–60 to 16.7 percent in 1965–66, but higher education relied mainly upon private and State sources for the bulk of its capital receipts. Further, the capital expansion of 2-year institutions during this period (enrollments doubled) was financed almost entirely from non-Federal capital receipts and loans.

Due to their rapid growth it was necessary for institutions of higher education to rely heavily on debt financing. Consequently, the long-term debt of higher education increased four-fold during this 6-year period to a level of about $6.2 billion. However, the interest burden of this debt still amounts to less than 2.5 percent of current expenditures.

Private institutions increased the book value of their physical plant per student by almost *50 percent*, as compared to an increase of *12 percent* for public institutions. These figures suggest that private institutions were able to undertake a substantial modernization of their physical plant.

The Nature of the "Crisis"

The statistics just presented appear to reflect a state of financial vigor in higher education generally. In a period of rapid enrollment growth, higher education institutions have been able to increase their revenue per student, pay rising faculty salaries and substantially improve their plant and equipment. Moreover, the relative position of private institutions (in terms of revenue per student and faculty-student ratios) seems definitely to have improved. Then, what accounts for all this talk about a "financial crisis," especially in private institutions?

There are probably several reasons why individual institutions feel financial pressure. First, the data just presented are aggregative data which tend to mask great disparities in finances within various broad categories of institutions. Thus, many small institutions are in financial difficulties. Many of them have been in poor financial shape for a long time. Most Negro colleges, for example, have always been in dire financial need. They tend to be small—about two-thirds of the South's Negro institutions enroll fewer than 1,000 students. Since Negro students are generally poorer than whites, and their alumni are not as affluent, these institutions cannot improve their relative position unless they receive disproportionately larger support from Federal or State sources. These sources have not yet reached sufficient levels to bring their resources per student up to regional levels.

Second, the major universities have been hard hit by the recent leveling off of Federal research expenditures. During the period 1959–1966, Federal research expenditures increased *at an annual rate* of 14 percent in the private universities and 16 percent in the public universities. By 1965–66, this revenue source accounted for about one-fifth of the revenue of universities. While data are not yet available on the precise magnitude of the recent slowdown in Federal research support, it is estimated that Federal research expenditures at universities did not increase from 1966 to 1968. This stabilizing of the level of Federal research expenditures during the Vietnam period has certainly caused sharp dislocations at institutions heavily involved in research activities.

Third, although most institutions have managed to increase their resources rapidly in the recent past, many are apprehensive about their ability to do so in the future. Public institutions fear that State legislatures and local authorities will slacken their support. Private institutions are fearful that further increases in tuition will "price them out of the market." Both look to the Federal Government for increased help in the future.

The Outlook for the Future

As noted above, the past decade has seen extraordinarily rapid increases in higher education expenditures due both to rapid enrollment growth and to increasing outlays per student. Between 1959 and 1966 current expenditures of higher education institutions rose about 14 percent per year and the percent of GNP devoted to institutional expenditures rose from 1.4 percent to 2.3 percent.

There is reason to expect that the pressure on higher education to increase total revenues may slacken slightly in the future for two reasons. (1) The rate of increase in enrollments is likely to slacken for demographic reasons. Even if greater efforts are made to promote equality of educational opportunity and enrollments rise by one-half million above the number now anticipated, full-time equivalent enrollments would be expected to increase about 5.5 percent annually between 1966 and 1976. This compares with an annual rate of increase of 8.5 percent for 1959 to 1966. (2) The rapid expansion in new doctorates awarded will provide an increase in the supply of potential faculty members in the early 1970's. Since faculty salaries are highly responsive to supply and demand conditions, this will reduce the upward pressure on salaries somewhat.[6]

These trends imply that substantial improvements in institutional resources per student can be accomplished at an annual growth in institutional outlays which is somewhat lower than that of the recent past. An annual increase in current institutional expenditures of 11 percent over the next decade seems a reasonable expectation. Together with a more modest rise in capital expenditures, this rate would imply a $40 billion total outlay by higher education institutions in 1975–76 or about 3.3 percent of GNP (table 2).

No one seems to doubt seriously the ability of the economy to support an 11 percent growth rate in higher education expenditures. Although this rate would imply that a growing share of national income be devoted to higher education, the share has grown in the past and the sums of money are small relative to GNP. Observers are less sanguine

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[6] In a paper prepared for this report, Richard B. Freeman, Yale University, has used a statistical model to establish several important findings about the faculty labor market. This paper will be published as part of his forthcoming book on the labor market for scientific and technical personnel. Dr. Freeman found that: (1) the labor market for faculty does generally perform its allocative function adequately but rigidities which limit the salaries of faculty in fields of high demand produce relatively large numbers of vacancies in these fields; (2) because of the internal (to the university) constraints on using basic teaching salaries to attract people in disciplines in great demand, universities make considerable use of nonsalary incentives; (3) the number of new Ph. D.'s choosing to teach is highly responsive to the level of salaries in universities; and (4) virtually all of the growth of Ph. D. faculty in recent years has resulted from new entrants into the labor market rather than from the inter-sector mobility of experienced Ph. D.'s.

TABLE 2

Expenditures by institutions of higher education related to gross national product: United States—1959–60 to 1975–76

Academic year	Gross national product (in billions)	Expenditures by institutions of higher education	
		Total (billions)	Percent of GNP
1959–60	$483. 7	$6. 6	1. 4
1961–62	520. 1	9. 5	1. 8
1963–64	590. 5	12. 2	2. 1
1965–66	683. 9	15. 8	2. 3
1975–76	1, 212. 0	40. 0	3. 3

about the ability of our institutional and governmental structure to make the financial decisions required to pay for expanding enrollments while also improving resources per student. Doubts are raised about the three major sources of higher education finance: State and local governments, the Federal Government and the private sector.

Many observers foresee a growing reluctance on the part of State and local governments to provide funds for postsecondary education. They point to the relative lack of responsiveness to income growth of State and (especially) local tax systems and to the growing pressures from other claims (e.g., the cities) upon State and local budgets as the sources of pessimism. However, many of these factors were also true a decade ago and State and local support grew very rapidly over this period. State and local governments responded to the clear desires of their most influential constituents for more and better public postsecondary opportunities, and tax revenues were found to finance expanded State and local spending for higher education.

In spite of the fact that numerous surveys of consumer expenditures have shown that consumers are willing to spend increasing portions of their income on higher education as incomes rise, many observers have concluded that the private sector—and students in particular—cannot be expected to provide a growing revenue source. Part of the argument is that with the growth of private tuitions and fees only the affluent can afford to pay all of the outlays necessary for private higher education out of current income. While this contention is certainly true, especially for the more expensive private colleges, it can be used to establish a case for greater access to loans for all college students, as well as to support the argument for more Federal grants. There is no evidence that if the appropriate mix of loans and grants were regularly available, students would be unwilling to borrow substantial sums to finance their college education.

A more significant doubt about the ability of student charges to keep pace with growing higher education costs stems from the competition between public and private colleges and universities. Many private institutions feel that they are in the position of selling (almost) the same "product" as the public institutions but, because of the lack of public subsidy, they must charge a higher "price." Although private institutions face this "two price-one product" difficulty to different degrees, there is some fear that pressures will become more widespread and intense in the future. As low-tuition public institutions proliferate, especially in areas of the country not previously served by such institutions, some private colleges will be unable to maintain enrollments if tuitions are raised to meet growing costs. The prospects for these institutions are growing deficits or absorption by the public sector, unless public institutions relax their traditional low-tuition policies, or the Federal Government provides disproportionate support to private colleges.

What about the Federal Government? The Federal "fiscal dividend" has many claimants. Among the successful claimants in the recent past has been higher education. The argument for an even greater Federal role in the future is that only Federal revenue sources are sufficient, and expand quickly and automatically enough, to meet the growing needs of higher education. While it is certainly true that Federal revenues grow from $10–15 billion per annum, it is equally clear that other domestic needs—rebuilding our cities, raising the incomes of the poor, improving elementary and secondary education, better health services for children—will provide higher education with very stiff competition for Federal funds.

Summary

While it is clear that our Nation's capacity to finance higher education will grow sufficiently in the future, projections of future financing by source are certainly highly problematical. If State and local governments weaken in their support of higher education, if loan facilities fail to develop adequately, if institutions are unable or unwilling to raise tuitions sufficiently, there will emerge a crisis in the financing of higher education. But none of these predictions are inevitable.

If the projected increases in enrollments occur, and if current expenditures *per student* continue to increase at a rate of 5.5 percent annually, *total* institutional expenditures (current and capital expenditures) will likely rise from $15.8 billion in 1966 to about $40 billion in 1976. The following table represents a reasonable guess as to the source of these funds.

This projection assumes that State and local contributions will slacken somewhat, growing at almost 9 percent per year rather than the recent 14 percent. It assumes that income from student charges will grow at about 10.5 percent per year and will account for about

TABLE 3

Percent distribution of income of institutions of higher education by source of funds 1959–60 to 1975–76

Year	Income source					
	Federal Government[1]	State and local government	Student charges[2]	Private giving	Other private	Total
1959–60	18	27	37	7	11	100
1965–66	21	26	38	5	10	100
1975–76	25	22	40	4	9	100

[1] Federal expenditures for higher education not dispensed through institutions are excluded from the table. The primary categories of spending excluded are VA assistance, SSA payments for students 18–22, the proposed national student loan bank, and the proposed educational opportunity grant program.

[2] Tuition and fees plus income from auxiliary enterprises.

40 percent of total income of institutions. It implies about a 12 percent annual increase in Federal expenditures. The Federal share of current and capital expenditures would increase from 21 percent to 25 percent, or from about $3.4 billion in 1966 to $10 billion in 1976. This latter figure not only includes the increase in Federal expenditures necessary to finance the expected increase in enrollments, but also the funds required to help institutions finance an increase of one-half million in enrollments by those now denied educational opportunities.

IV. Special Problems of Graduate Education

Graduate education is the culmination of the formal process of preparing individuals for teaching and for research and technical endeavor at the frontier of expanding knowledge and innovation. The graduate schools of the U.S. encompass a predominant portion of the intellectual forces that can assure the Nation of continuing capability to advance knowledge, to extend the base for technological progress, to influence the social, cultural, and economic quality of national life, and to exert intelligent and effective leadership in world affairs. Since the benefits from the acquisition of new knowledge accrue to all members of society, regardless of the State they live in, it is desirable that the Federal Government finance a much larger share of the costs of graduate education than it does any other major sector of our educational system. For this reason Federal policy, especially in recent years, has recognized the need for a "special relationship" with graduate education and research.

While the Federal Government now has a broad array of legislative authority allowing it to aid this sector of the higher education system in a variety of ways, the project method of support has been the primary mechanism for financing advances in knowledge. This method of support is designed to assure that the most gifted and qualified individuals receive support. Since most significant advances in knowledge are made by a few gifted persons, the project method of support has been a key element in the advance of American science during the past 2 decades.

Nevertheless, some problems may have resulted from the necessarily unbalanced pattern of support for graduate education and research. These imbalances include:

1. *An imbalance in administrative and institutional arrangements*

Research projects are a major source of funds for recruitment of faculty and even recruitment and support of graduate students, yet they do not necessarily fit into the administrative arrangements needed for the coherent administration of a university. Since a researcher's reputation in his discipline is the main determinant of his capacity to obtain project grants, his concern for his discipline, though appropriate in itself, may expand to the point where there is little room left for loyalty to an institution.

Since professors often find that good research is rewarded with large grants and higher salaries and status, and that good classroom teaching is not rewarded at all, it is not surprising that there are widespread complaints that classroom teaching has suffered while research expands.

Furthermore, the screening of research proposals in a centralized way may mean that research support tends to favor established scientists. Excellent proposals by young scholars without national reputations might be more likely to get support if scientists could apply for more support at the university level.

2. *An imbalance in the relationship among fields of study*

Federal research funds for the sciences exceed by far support for nonscience fields. The humanities and social sciences no doubt sometimes benefit from Federal aid to science. Such aid may, for example, release institutional funds for nonscientific fields. But the disproportionate support for science also increases the relative attractiveness of specialization in science, and may thus "raid" the humanities and social sciences of capable people, while adding less productive scholars to the sciences. Moreover, there is evidence that some institutions use discretionary funds to "overmatch" Federal support for the sciences so that they can develop at least one first-rate graduate department. Such behavior drains nonscientific fields of support they would otherwise have.

3. *An imbalance in institutional patterns*

Federal research and development funds are highly concentrated in a relatively few excellent universities. In 1966, about 89 percent of total science research and development funds were concentrated in 100 universities, and 30 percent of these funds were distributed to just 10 institutions.

The present system of giving aid for research to the leading scientists has certainly strengthened the outstanding institutions *vis-a-vis* those of lesser rank. This is generally desirable since these centers of excellence are national assets. But when excellence is concentrated in relatively few institutions, certain regions and centers of population may lack the centers of graduate education and research required to upgrade their social, cultural, and economic development. Further, since the same faculty and graduate students usually participate in undergraduate instruction, the development of high quality undergraduate education in these regions and centers of population is often hindered.

There is, therefore, a case for strengthening a limited number of "second rank" universities through development programs.

V. Major Issues and Alternatives

STUDENT AID VERSUS INSTITUTIONAL AID

One major issue to be resolved is the *relative emphasis* which should be given to student aid and institutional aid in designing Federal programs for higher education in the future. The Federal Government could put major emphasis on aid to students and their families to enable them to pay the cost of going to college—whether through scholarships, loans, or tax devices. Alternatively, the Federal Government could put major emphasis on aiding institutions of higher education directly—whether through categorical programs to finance specific types of expenditures or through general block grants.

Most observers agree that both types of aid are needed. No one is suggesting that the Federal Government limit itself only to student aid or only to institutional aid. Nevertheless, major emphasis could be put on one or the other kind of aid in the future, and it is useful to look carefully at the advantages and disadvantages of each.

The choice between emphasis on student aid and emphasis on institutional aid depends partly on the weight given to different objectives for higher education. Student aid is most appropriate if a high weight is given to the objective of improving equality of opportunity for higher education. Aid to students can be directed to those students from low-income families who need financial aid to attend college. While student aid alone will not correct the problem of inequality of opportunity, studies indicate that college-going among the poor is significantly influenced by the amount of student aid. A major program of student aid would, of course, aid some low-income students who would have gone to college anyway, but it would also significantly increase the number and proportion of low-income students getting a higher education.

An equal sum spent on institutional aid, by contrast, would have far less effect on equality of opportunity. It is true that institutional aid helps colleges and universities meet their expenses, and, therefore tends, other things being equal, to ease the pressure on institutions to raise tuition. Lower tuition encourages college-going in general. However, most of the higher income students receiving indirect Federal subsidies in the form of lower tuition would attend college without the subsidy.[1] In fact, since higher income students tend to be relatively insensitive to tuition charges in determining whether or not to attend college (but not necessarily which college), the lower tuitions would result mainly in subsidies to higher income students who would be willing to pay more while giving a relatively weak incentive to lower income students.

If one is concerned that the quality of higher education is suffering because not enough resources per student are available to institutions, then direct institutional aid may be the most effective way to alter the situation.[2] Student aid channels more resources per student to institutions only indirectly by enabling them to raise tuition more than they otherwise would have.

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[1] The College Scholarship Service standards of expected parental contribution (according to family size and income levels) can be used to roughly estimate the additional amount of income students might be willing to pay for the privilege of attending institutions. The College Scholarship Service standards can only be used as a rough guide because there might be some decline in enrollment among higher income students if the current "surplus" given to them and their families via low tuitions were removed through tuition increases. Nevertheless, for *freshman* students attending 4-year public institutions in 1966, it is estimated that these students and their families collectively received a "surplus" of $273 million. Further, if tuition at 4-year public institutions had been raised by an average of $500 per student, and the additional "need" for grants generated by this tuition rise had been all paid out of the increase in revenue, public 4-year institutions would still have received an additional $177 million in revenue from their *freshman* class alone.

The choice between emphasis on student aid and emphasis on institutional aid also depends in part on one's basic philosophy about higher education finance for the long-term future. Those who believe that we should be moving toward free higher education for all (just as we have free elementary and secondary education) might favor increased Federal institutional aid as a step in this direction. Those who believe that the beneficiaries of higher education should continue to bear part of the cost through tuition would tend to favor emphasis on student aid to needy students and an improved loan market for all students. In general, aid to students tends to encourage, rather than substitute for, non-Federal sources of funds for higher education (tuition and State and local contributions).

Moreover, institutional aid, unless given in disproportionate amounts to private institutions, does not deal effectively with the "two-price" problem mentioned previously. By freeing institutions to raise tuition, student aid tends to ease this problem.

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[2] There is sparse information on the extent to which additional resources improve institutional quality, and on what are the ingredients of quality in higher education. Robert Berls of the Bureau of Higher Education, U.S. Office of Education, has surveyed the available literature on this subject and prepared a paper for this Report (to be published in the forthcoming Joint Economic Committee compendium on higher education). In general, the findings of this paper indicate that intellectual and developmental growth and change in students depends more upon their state of readiness or predisposition to change, than upon any factors in the environment of the institutions they attend.

This conclusion is supported by another study of college effects upon student achievement, undertaken for this Report, by Donald Rock, John Centra, and Robert Linn of the Educational Testing Service, Princeton, N.J. Their preliminary findings indicate that 85 to 90 percent of the between-college variation in student achievement (as measured by graduate record examination scores) was predicted by the characteristics of students before they entered college (their college board scores). A statistically significant portion of the remaining variation was due to the characteristics of the institutions.

While the quality of the (gross) instructional output of institutions is affected mainly by the characteristics of their students, and secondarily by the nature of the institutional resources, research has also shown that students with a very pronounced intellectual orientation are attracted to institutions with a strong intellectual climate. (The precondition of readiness is necessary for further development of the student, but it is not a sufficient cause of such development; a vigorous intellectual life in a college is necessary to induce further growth and change.) However, since instructional output is influenced by the characteristics of students, the instructional output of institutions striving to improve themselves can be raised by student aid measures, which may not even add to revenues, because institutions can attract a more diversified and generally more capable student body with additional student aid.

To sum up this discussion, in general: (1) Student aid is a more effective mechanism for promoting equality of educational opportunity; (2) institutional aid is a more effective mechanism for rapidly channeling resources per student into the higher education sector of the economy.

ALTERNATIVE FORMS OF STUDENT AID

Student aid can be extended in a variety of forms. It can include grants or scholarships based on need or achievement or both; work-study grants; loans with various types of repayment provisions; and tax credits or other tax advantages for the student or his family. The relative merits and drawbacks of these various forms of student aid are discussed in this section.

Grants and Scholarships

Grants or scholarships may be awarded on the basis of need, achievement or some combination of both criteria. When ability or achievement is the sole basis for scholarship awards, subsidies are given to many students who can afford to attend the school of their choice without the subsidy. If the primary objective of the aid is to overcome financial barriers to college attendance by students from low-income families, basing the scholarship or grant on need is a more efficient way of accomplishing the objective, since the aid can then be pinpointed at those who actually need the funds in order to go to college.

Federal scholarship programs can generally use one of two alternative forms of need criteria. The first type, used in the existing opportunity grant program, bases the amount of the award upon the financial status of the student *and* the cost of education at the specific school he attends. The amount of the award under the second type of need criterion is based exclusively upon the student's financial status. A possible advantage of the first criterion is that low-income students are not given more funds than they need to attend a particular institution. However, the amount of scholarship aid the student may receive is unknown to the student until he is accepted at a college. This uncertainty can prevent the student from even applying to high cost institutions. In contrast, scholarships awarded exclusively on the basis of need can be designed to overcome the disadvantage of uncertainty, but some lower income students may be given more subsidy than they require for tuition and living expenses if they choose to attend low cost institutions.

Work-Study Programs

Work-study programs are an alternative form of aid to students. In comparison to scholarship grants, these programs require the recipient to perform some on-campus or off-campus job in order to receive financial aid. In some ways, this program may not really be a subsidy to the work-study student at all, but rather a general subsidy to the employing organization. If the work-study student would have gotten a job anyway, at the same wage, he is not aided by the program at all. For example, if the job is on-campus, the program would be providing Federal funds for the benefit of all students, because it replaces funds which the institution would have spent to provide necessary services. On the other hand, if jobs would not have been available, or if students receive a higher wage than without the work-study program, or if special weight is to be attached to the learning experience of the job, then work-study programs may be of considerable benefit to the recipient student. Against these factors, however, must be weighed the possibility of poor academic performance because of time lost from studying.

Loans

Since investment in higher education requires a large outlay of funds and the gains, in terms of higher income, are not recoverable until some years in the future, a loan market is necessary to provide the required funds. A loan for education, however, is different from a loan for the purchase of a physical asset because the borrower cannot offer his future earnings as security on the loan. Unlike houses and cars, people cannot be mortgaged. Lenders will compensate for the lack of collateral on education loans by charging a higher interest rate or by not making the loan. Consequently, there will not be enough borrowing for higher education because borrowers will have to meet a stringent repayment test (higher interest rate).

Moreover, since lenders are willing to make some no-collateral educational loans to good risks or accept physical assets as security, a private loan market will tend to exclude children from low-income families. These families do not have sizeable tangible assets to offer as security and lenders are likely to consider low-income borrowers poor risks.

The special nature of education loans, therefore, creates a need for the Government to correct the loan market for biases against investment in higher education. To some extent, the Federal Government has done this through the guaranteed loan program. But a guarantee is not enough for many low-income students who might be willing to borrow. Commercial banks will generally ration their credit by financing their regular and best customers, so the loan market bias against education loans to low-income students is likely to persist despite the guarantee.

The NDEA loan program does overcome this difficulty by giving loan funds directly to institutions of higher education, and insisting that need be a major criterion for extending the loan. However, this program is limited in size because it requires substantial annual appropriations by the Congress. Thus, there is a requirement for a loan program which relies upon private capital markets for funds and assures access to low-income students.

Contingent Loan Repayment Plans

Although investment in higher education yields high average increases in lifetime earnings, there is a great deal of variation in these expected earnings increases. This variation in the anticipated gains from higher education will discourage some borrowers from borrowing to finance part of the cost of their education. These individuals might be more willing to borrow for higher education purposes if they could purchase insurance that reduced the risk of borrowing associated with the possibility of earning lower than average earnings.

Contingent loan plans provide a form of insurance against low earnings prospects and this insurance or risk-pooling feature is the main advantage of contingent loan plans. The *Educational Opportunity Bank* (*Zacharias Plan*) is an example of a contingent loan plan. Under this program, students would borrow funds for their college expenses and the Bank would recoup the loans through annual payments based upon a fixed percentage of the borrower's income. For example, the borrower might pledge to repay 1 percent of his gross income over 30 years for each $3,000 borrowed.

In addition to the pooling feature, contingent loan plans offer another advantage over existing loan programs—the long repayment period facilitates the borrowing of large sums without imposing burdensome annual repayments. However, more conventional types of loan programs could be designed to lend funds for similar long periods.

In contrast to more conventional loan plans, the many technical problems inherent in contingent loan plans offset their risk-pooling advantage at this time. These technical problems include the difficulty of estimating the terms of repayment necessary to enable the plan to operate at a predetermined level of subsidy, and more importantly, the heavy subsidies which may be required if the Bank attracts a disproportionate share of borrowers whose future income will be low.[3]

Tax Credits

Two types of tax-credit plans, one presented in a bill by Senator Ribicoff and another presented by Senator Prouty, have received considerable discussion as aids to financing postsecondary education. Both proposals would make it possible for students to claim a tax credit based upon the cost of tuition and books, an important part of the expenses of most college students and especially so of students from low-income families. The major benefit under both plans would go to students who attend private 4-year colleges. Under the Ribicoff plan the credit is against the tax. Under the Prouty proposal a refund would be authorized if the credit was larger than the tax. However, because both proposals would reduce allowable deductions by the amount of other aid received, the children of poor parents who already receive scholarship aid, or whose parents are too poor to pay taxes, would scarcely benefit from these proposals.

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[3] Because of the problem of adverse selection of participants, none of the studies of the Educational Opportunity Bank have been able to estimate its costs and effects with any degree of reliability. See App. C for a further discussion of the Educational Opportunity Bank.

In general, the payment of tax credits to families with students in college would provide substantial subsidies to upper and middle income students. For instance, more than one-half of the tax credits under the Ribicoff plan would go to families with incomes in the highest income quartile.

Moreover, under any of the tax credit plans proposed, there would be little impact on the college attendance of any group. The aid given any income group would be small in relation to total income and the most aid would go to higher income students, whose college enrollment is not particularly sensitive to changes in costs.

Therefore, when compared with scholarship or subsidized loan plans, tax credits to families are an inefficient policy instrument for furthering higher education objectives.

ALTERNATIVE FORMS OF INSTITUTIONAL AID

Institutional aid may also take different forms. The major alternatives are: (1) formula grants; (2) categorical aid for buildings, equipment, and similar items; and (3) cost-of-education allowances tied to student aid. The relative merits and drawbacks of these forms of aid are discussed in this section.

Formula Grants

All formula grants proposed involve a formula which allots each school a sum of money based on some measure of performance or institutional inputs. Formulas have been proposed which allot funds based on research contracts landed, degrees granted, number of enrolees, current expenditures, etc.

The allocation of $1 billion under two representative formulas is shown in table 4. This table illustrates two important features of formula grants. First, formulas based upon some measure of expenditures, when contrasted with formulas geared to enrollment, generally tend to favor institutions with relatively high expenditures per student (e.g., private universities). This is true even when a formula tied to enrollments gives graduate enrollments three times the weight of undergraduate enrollments, and 2-year enrollments are assigned lesser weight than undergraduate enrollments. Second, it is clear that by combining measures of expenditures and enrollments, it is possible to devise a variety of formulas which provide some degree of compromise between giving disproportionate aid to institutions with high expenditures per student or with relatively low expenditures per student.

Proponents of formula aid have spent considerable time searching for a formula which spreads aid most "equitably" over existing institutions. It will probably be concluded that a formula is a good device if it does not lead to a relative decline in the importance of any class of institutions. Consequently, one of the disadvantages of institutional aid by formula is that it encourages the status quo. Clearly a system which tries to maintain the relative shares of different types of institutions will not be particularly adaptable to the changing needs of students and society in general.

Another drawback of aid by formula is that the formula gives rewards based upon a necessarily oversimplified measure of institutional outputs or inputs. Depending upon the measures adopted, the formula tends to encourage institutions to increase the rewarded measures of output or input. For example, subsidies based on degrees might encourage some institutions to crank out more degrees than they otherwise felt appropriate, while formulas based upon enrollments produce different pressures. For a formula to overcome this drawback, it would have to use some measure of the output of institutions which is a reasonably accurate index of the total benefits to society from higher education. With our present knowledge, no formula can be devised to fully satisfy this requirement.

Moreover, the political necessity for a formula which does not discriminate against any class of institutions indicates another problem with formula grants. The aid cannot be targeted at particular schools to improve their relative position. For instance, general formula aid will not significantly improve the position of developing institutions unless a massive amount of aid were made available under the formula.

On the other hand, formula aid is an administratively effective mechanism for giving colleges and universities large sums of money. Further, the absence of discretion by the responsible Federal agency would undoubtedly enhance institutional autonomy and freedom and allow institutions maximum discretion in how to spend their revenues (except that their choices, as indicated above, may be distorted by the reward structure of the formula).

An additional advantage of formula aid, as opposed to categorical aid for facilities or equipment, is that aid by formula may provide a more stable source of funds because it would probably be less subject to sharp reductions in funding during periods of fiscal stringency.

Categorical Aid

Today, the Federal Government has a sizeable list of programs which gives aid to institutions so that they can purchase particular

TABLE 4

Aid based on Federal program costing $1 billion

(Estimated for 1969–70)

Formula	All public institutions		Public institutions					
			Universities		Other 4-year		2-year	
	Amount of aid (millions)	Percent of expenditures	Amount of aid (millions)	Percent of expenditures	Amount of aid (millions)	Percent of expenditures	Amount of aid (millions)	Percent of expenditures
Aid based on expenditures [1]	$595	8. 1	$352	8. 1	$162	8. 1	$81	8. 1
Aid based on full-time equivalent enrollment [2]	654	8. 8	332	7. 4	225	11. 1	97	10. 2

Formula	All private institutions		Private institutions					
			Universities		Other 4-year		2-year	
	Amount of aid (millions)	Percent of expenditures	Amount of aid (millions)	Percent of expenditures	Amount of aid (millions)	Percent of expenditures	Amount of aid (millions)	Percent of expenditures
Aid based on expenditures [1]	$405	8. 1	$174	8. 1	$213	8. 1	$18	8. 1
Aid based on full-time equivalent enrollment [2]	346	7. 1	140	6. 5	193	7. 8	13	6. 7

[1] Educational and General *less* Organized Research.

[2] Formula: X=$159 per student
a. Undergraduate at 4-year college=X×F.T.E.
b. Graduate student=3X×F.T.E.
c. Student at 2-year college=⅔X×F.T.E.

items (e.g., books, equipment, computers, dormitories, classrooms, networks for knowledge). These categorical aid programs should be distinguished from categorical aid programs related to *broad purposes*, such as the Office of Education developing institutions program or the National Science Foundation institutional grants program.

One disadvantage of categorical aid tied to a particular type of institutional input (e.g., computers) is that it gives institutions an incentive to purchase more of that item than they would have purchased if the aid were given in a more fungible form (e.g., formula grants). Federal aid for construction, for example, may induce some overspending on buildings or reduce incentives to use buildings more efficiently. It may distort institutional spending patterns away from what the institution itself would regard as optimum if given the funds to spend freely.

To the extent that there is no overspending (i.e., categorical aid tied to the purchase of particular items is spent on items which would have been purchased anyway) categorical aid is simply an administratively costly method of dispensing fungible institutional aid.

A further drawback of categorical aid programs for facilities and other institutional items is that they are often cut back sharply during periods of fiscal stringency.

Some proponents of categorical aid for physical items have argued that this form of aid is advantageous because Federal administrators can channel the aid to expanding institutions. If this is the program objective, however, cost-of-education allowances tied to Federal student aid or formula aid related to increases in enrollments would accomplish the same objective without the distortions caused by categorical aid related to particular items.

One advantage of aid for particular categories of expenditures is its political acceptability. Consequently, some of the drawbacks of this type of institutional aid could be lessened through efforts to consolidate categorical aid programs for particular items and to broaden the definition of the categories (e.g., facilities rather than dormitories, library purposes rather than books, and equipment rather than computers).

Cost-of-Education Allowance

A cost-of-education allowance is the sum of money paid to an institution to help pay the cost of educating a student receiving Federal student aid. For example, the National Defense Education Act graduate fellowships are accompanied by a cost-of-education allowance payable to the institution in which the graduate fellow is enrolled.

This form of institutional aid has many of the same advantages of formula grants. It is easy to administer and institutions can use the aid for whatever purposes they deem appropriate.

Cost-of-education allowances are generally intended to reimburse institutions for the *additional* cost they incur in helping to further some national purpose. Part of the rationale for graduate fellowships has been the national interest in increasing the number of very highly educated people, especially scientists and potential college teachers. Graduate fellowships help to induce highly talented people to continue their education, but the cost of providing graduate education far exceeds the tuition charged by the institution to the graduate student. The cost-of-education allowance helps to compensate the institution for the additional cost of taking on the education of the fellowship recipient. Similarly, since equality of educational opportunity is a national goal and society generally benefits from its attainment, one could argue that the taxpayers in a particular State should not bear the burden of the additional costs public institutions absorb when they educate students who would not enroll without Federal student aid.

If cost-of-education allowances are set high enough they can serve as an incentive for institutions to fulfill national objectives by enrolling highly qualified graduate students or needy undergraduate students.

Cost-of-education allowances rewarding institutions for accomplishing broad national purposes can have political drawbacks because some institutions are better suited to achieve these purposes than others. Institutions with first rank graduate schools benefit disproportionately from graduate cost-of-education allowances. In similar fashion, if cost-of-education allowances were tied to Federal scholarships awarded on the basis of family income limitations, a disproportionate amount of aid would go to public institutions. About two out of every three students with family incomes in the lower half of the income distribution are enrolled in public institutions. Further, public institutions might absorb an even greater share of a rise in enrollments due to expanded Federal student aid to lower income students. From the point of view of private institutions, however, expanded student aid makes it easier for them to raise tuitions, and this aid also releases institutional funds now used to provide assistance to lower income students.

VI. Priorities and Recommendations

Federal aid to higher education in the future should emphasize two major national commitments:

—It should promote *equality of opportunity* by ensuring that all able students can afford to go on to higher education and that institutions are able to accommodate them.

—It should strengthen *graduate education and research* by providing support for graduate students and developing institutional capacity for graduate teaching and research at an increasing number of centers of excellence.

Higher education has always been an important avenue to the economic, intellectual, and social advancement of individuals. Further, providing equality of educational opportunity is a primary means of advancing, strengthening, and preserving our democratic society. Since the benefits to society from the promotion of equality of educational opportunity transcend State boundaries, and because concentrations of low-income students are found in States with low fiscal capacity, State support of higher education has been insufficient to attain equal opportunity. Moreover, the traditional mode of State subsidy—low tuitions for all—does not efficiently pinpoint aid on those who need it most. Consequently, unless the Federal Government pursues a strategy for financing higher education which gives a high priority to this objective, large numbers of capable young people will not receive the higher education they would have obtained had they come from families of higher socioeconomic status. The Nation will not only lose the productivity of able student dropouts and suffer the poor morale of youngsters who know they have not been given an equal opportunity, it will also forego a very effective way to reduce the present disparities in income among ethnic and geographic groups. *Thus, the Federal Government should adopt as its explicit long-range goal the removal of financial barriers so that postsecondary education is guaranteed to all persons capable of benefitting from it.*

The case for Federal support of research and graduate education is also compelling. Since the ultimate benefits of basic research accrue to the entire society rather than a single purchaser of research, local and State governments and private enterprise cannot be expected to support the level of research warranted by the total potential benefits of this activity. Thus, the Federal Government, acting for society as a whole, must support a large share of the Nation's basic research effort. The Federal Government must also support applied research and development at universities because they are related to defense, health, education, and other public problems. Thus, since research and graduate education are complementary activities, private institutions and State and local governments cannot be expected to provide sufficient support for graduate education. Moreover, the professionals trained by the graduate schools are highly mobile, and often leave the State in which they receive their graduate education. Since States and particular institutions are subject to this "brain drain," but the Nation is not, Federal support of graduate research and training is appropriate.

RECOMMENDATIONS

1. *An expanded educational opportunity grant program for needy students combined with a cost-of-education allowance*

This proposal would provide a Federal grant to every needy full-time student attending a postsecondary institution. The present educational opportunity grant program would be amended to provide for a broader program of assistance to needy students combined with institutional aid in the form of a cost-of-education allowance.

All needy full-time students in good standing would receive a Federal grant ranging from $200 to $1,500. The size of the grant would be based solely on adjusted family income.[1] Students would be eligible for a maximum of 4 academic years, unless they are enrolled in a degree program which normally requires more than 4 academic years for a baccalaureate degree.

In order to receive a grant, the student would file the necessary forms with the appropriate public or private nonprofit agencies designated by the Commissioner of Education. These agencies would then estimate the size of the award and notify the student. The student, during the normal admissions process, would choose an institution to attend. The institution would then bill the Office of Education for the student's opportunity grant. The Commissioner would dispense the award through that institution.

The cost-of-education allowance would be $100 per student aided plus 25 percent of each individual grant in excess of $200. Thus, an institution's allotment for each term would be based upon the total amount of Federal grants received by its students during that term. No proprietary institution would be eligible for a cost-of-education allowance.

Further, a cost-of-education allowance should be applied to funds distributed under the NDEA loan program and the college work-study program to help offset the cost of educating federally induced enrollments. It is recommended that each institution receive a sum equal to 25 percent of the amount of Federal funds it receives under these programs.

Since the added cost of education per student and the number of students induced to enroll because of the Federal grant can only be estimated roughly, the recommended amount of institutional aid represents an informed guess as to the amount required to ease the financial burden imposed upon institutions by the expanded Federal opportunity grant program.

If this program were enacted in fiscal year 1970, it could become operational in fiscal year 1972. Its total cost for that year would be about $2.7 billion. Approximately $2.0 billion would be given to students and $700 million to institutions. By fiscal year 1976, the total cost of the opportunity grant aid would rise to $3.1 billion and the institutional aid would amount to about $1.2 billion. These cost estimates assume a 20 percent liberalization of benefits by fiscal year 1976.

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[1] App. D contains a more detailed discussion of how the size of each grant would be determined.

In fiscal year 1972, almost one-half of the estimated number of students enrolled full-time, or 2.4 million students, would be aided by this grant program. The full impact of this program on enrollments will not occur until it is operational for several years, because a major effect will be upon the aspirations, expectations, and performance of students in the tenth and earlier grades at the time the program is enacted. By fiscal year 1976, the grant program could induce a 800,000 rise in full-time enrollment above the 6.3 million anticipated. However, some decline in part-time enrollment would be expected as many students will shift to full-time attendance.

2. *The National Student Loan Bank (NSLB)*

To remedy the deficiencies in the present Federal programs for student loans, the NSLB is proposed.[2] The NSLB would be a *nonprofit private corporation* established by the U.S. Government. The NSLB would issue its own securities to raise capital for student loans and would make loans at *fixed interest rates.* It would replace the guaranteed loan program. The NSLB would have the following features:

The Bank would lend any eligible undergraduate student or graduate student (or medical, dental, etc.) an amount each year which could not exceed his tuition and living costs minus any Federal aid received. Eligibility would be based solely on enrollment in an institution of higher education and would extend for up to 5 years at the undergraduate level and 5 years at the graduate level.

The NSLB would devise methods of repayment that allow for various terms extending up to 30 years. Provision would be made for rising repayments over time (in keeping with income) or constant annual payment, at the option of the borrower.

Interest during enrollment would be paid by the Federal Government. Interest charges would be set in such a way that there would be *no* subsidy during the repayment period.

Federal loans might be repayable through the Internal Revenue System. Even without this feature, the NSLB would probably have relatively lower collection costs than banks do under the present guaranteed loan program.

The Federal Government would reimburse the Bank for losses due to death, disability, or default, as at present. In addition, a feature might be added which would allow for a limited form of pooling or mutualization of risk. For any year in which a borrower's income falls below certain levels, a portion of the loan payment for that year would be cancelled. This feature could be designed to affect 5–10 percent of the scheduled repayments.

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[2] See app. D for a full discussion of this proposal.

3. *The new programs of special services for disadvantaged students should be fully funded*

This recommendation would expand funding for *Talent Search*, *Upward Bound*, and the new program of special services for students in college. These programs are designed to inform low-income students about the availability of financial assistance and college spaces, identify and motivate low-income students, and provide special compensatory academic and counseling services once these students are enrolled.

4. *The flexible programs of institutional development grants, administered by the National Science Foundation, the National Institutes of Health, and the Office of Education, should be extended to the National Foundation on the Arts and the Humanities, and each of these programs should be funded at a substantial level*

These programs should emphasize the development of new centers of excellence and new areas of study, taking cognizance of the needs of States and metropolitan areas that are not now adequately served by graduate programs.

5. *The cost-of-education allowances for Federal graduate fellowships should be raised*

Today, the cost-of-education allowances attached to Federal fellowships are thought to be much less than the actual cost of graduate education. An increase to a level of perhaps $5,000 would increase the funds available to support graduate education in institutions carrying the burden of educating federally financed students. Further, it is suggested that this figure be reviewed periodically so that it can be adjusted upwards as the cost of graduate education rises.

6. *NDEA graduate fellowships should be expanded to support 30,000 students by 1975*

Such a program, which would more than double the present number of students supported, would still give NDEA fellowships to only 6 percent of the estimated full-time graduate student body in 1975.

The unequal support of the sciences and humanities could be ameliorated by expanding NDEA fellowships, especially in nonscientific fields, and this would enable many part-time students to attend full time.

7. *A "sustaining grant" equal to a percentage of Federal research awards should be given to institutions of higher education*

Institutions could use these funds to support research of *their* choosing, or for teaching purposes. The amount of money a university received in this way would be determined primarily by the level of research support rendered on the basis of quality competition. Consequently, centers of excellence would continue to receive strong Federal support.

8. *Over the next several years, categorical aid programs related to specific items should be consolidated whenever possible and the definition of categories should be broadened*

Specifically, an institutional block grant program is recommended that would provide institutions with funds for any or all of the following purposes:

—Construction, renovation, and rental of any type of facility
—Establishment and improvement of library resources
—Acquisition of instructional equipment
—Funds for planning and evaluation of the functions and operations of the institution

This program should have a liberal Federal share of at least 50 percent, an adequate maintenance of effort provision, and should replace a series of existing categorical programs in the Office of Education and HUD. To encourage institutional planning, institutions would be required to submit a long-range plan.

9. *The developing institutions program (Title III—Higher Education Act of 1965) should be fully funded*

Full funding would provide for more than a doubling of Federal aid to developing institutions, many of which are Negro colleges located in the South.

10. *A new project-grant program to support experiments to improve the quality of undergraduate teaching and to devise new instructional programs should be established in the Office of Education. Programs of this nature administered by the National Science Foundation and the National Foundation on the Arts and the Humanities should be given increased support*

Funds could be sought to support programs or projects that give reasonable assurance of substantial improvement in the quality of undergraduate teaching. Applications would be reviewed at the Federal level by panels of nationally recognized leaders in the field of undergraduate teaching and appropriately selected student representatives. This proposed new program could concentrate on fields not covered by other Federal agencies and on broader programs cutting across several fields.

The funding implications of these recommendations are indicated in table 5. By fiscal year 1976, these recommendations *alone* imply an increase in Federal funding of $6.3 billion.

These recommendations will certainly not, by themselves, meet or fulfill all of the previously stated objectives of a Federal strategy for financing higher education. But, together with *fuller funding for other high priority existing Federal programs*, these priority items would provide progress toward all of these objectives, while dramatically improving equality of opportunity for higher education.

For *illustrative* purposes, table 6 shows how these recommendations relate to present Federal programs, and how these recommended programs might be phased in from fiscal year 1971 to fiscal year 1976. If these *illustrative* projections of total Federal funding levels were fulfilled, total Federal funds for higher education (excluding research) would rise from about $3.7 to about $11.2 billion in fiscal year 1976. If research expenditures double in this period, total Federal funds for higher education would be about $14.7 billion.

TABLE 5

Estimated increase in Federal funding to Fiscal Year 1976 to implement recommended programs (In millions)

Program	*Funding increase*
Grants to students	$2,925
Cost-of-education allowance (undergraduate)	1,200
Student loan program	740
Developing institutions	125
Special services for disadvantaged	90
Institutional development grants	300
Expanded NDEA fellowships and cost-of-education allowances	470
Sustaining grants	400
Project grants for teaching innovations	50
Total (in billions)	6.3

THE OBJECTIVES AND RECOMMENDATIONS

This concluding section reviews the relationship between the objectives of Federal support for higher education and our recommendations.

1. *Increasing equality of opportunity for higher education*

The proposed expanded opportunity grant program and National Student Loan Bank would, in conjunction with other Federal, State, and institutional programs, remove financial barriers to education for capable students. Further, the cost-of-education allowance will provide

TABLE 6

Illustrative projections of total Federal funds for higher education purposes—Fiscal year 1970 through fiscal year 1976 (Billions of dollars)[1]

Type of aid	Fiscal year 1970	Fiscal year 1971	Fiscal year 1972	Fiscal year 1973	Fiscal year 1974	Fiscal year 1975	Fiscal year 1976
Present programs dispensed through institutions	$2. 8	$3. 2	$3. 0	$3. 3	$3. 6	$3. 8	$3. 9
Present programs directly to students (SSA and VA payments)	0. 9	1. 2	1. 3	1. 3	1. 2	1. 0	0. 9
Proposed National Student Loan Bank	----	(2)	0. 2	0. 3	0. 4	0. 6	0. 7
Proposed EOG program	----	----	2. 0	2. 2	2. 5	2. 8	3. 1
Proposed cost-of-education allowance	----	----	0. 7	0. 8	1. 0	1. 1	1. 2
Other proposed funding dispensed through institutions	----	0. 2	0. 4	0. 7	0. 9	1. 2	1. 4
Total projected Federal support (excluding research)	3. 7	4. 6	7. 6	8. 6	9. 6	10. 5	11. 2
Projected research support[3]	1. 7	1. 9	2. 2	2. 5	2. 8	3. 1	3. 5
Total Federal support (including research)	5. 4	6. 5	9. 8	11. 1	12. 4	13. 6	14. 7

[1] Estimates of Federal funds appear larger here than implied by table 3 because table 3 excludes direct student aid which is not shown on the books of institutions. As recommended, the proposed EOG program would be given to students through institutions, and it would most likely be shown on the books of institutions. However, the proposed EOG program is more like the present VA program than the present EOG program, since every needy student would receive a sum not directly related to the cost of education at any particular institution. Thus, in comparing illustrative Federal expenditures in fiscal year 1970 and fiscal year 1976, it would be somewhat misleading to count the $3.1 billion proposed EOG program as Federal funds to institutions because this would inflate that figure. Consequently, in table 3, the proposed EOG program is treated in the same manner as the VA program.

[2] Less than $20 million.

[3] Arbitrary projection for illustrative purposes only. These figures exclude University-managed research centers supported by Federal funds. Federal funds for these institutions were an estimated $698 million in fiscal year 1968.

some incentive for institutions to accept disadvantaged students, while the expanded program of special services will inform high school students about the availability of student aid, help prepare them for college, and promote new efforts by colleges to provide the additional educational services required by some of these students.

2. *Improving the quality of higher education*

The various high priority programs for institutional support would provide a significant amount of *new* financial assistance to institutions of higher education. If the recommended program were adopted, about $2.6 billion in *new* funds might be made available to institutions by 1976.

In addition to this direct aid, the new Federal educational opportunity grant and loan programs would facilitate increases in revenue from student charges. Moreover, our studies indicate the single most important determinant of institutional quality (by any output measure) is the quality of the student body. The student aid program would enable many able low-income students to attend institutions of higher education and would facilitate a better matching of student ability with institutional offerings.

3. *Increasing the number and proportion of educated people*

The expanded scholarship, loan, and fellowship programs will stimulate enrollments at all levels, while the additional institutional aid will help finance this expansion.

4. *Preserving diversity in higher education and advancing institutional autonomy and academic freedom*

The recommended program promotes this objective in four significant ways:

(a) it provides institutional assistance that can be used for purposes selected by institutions and recommends that institutions be given more autonomy with respect to how they can spend funds provided through categorical aid programs;

(b) the block grants for research support would give institutions more fiscal flexibility and thus promote autonomy;

(c) the expanded student aid and cost-of-education allowances will help maintain diversity by enabling public and private colleges to continue to increase revenue from tuition without excluding middle and low-income students;

(d) the emphasis on student aid will increase the prospects that State and local governments and students and their families will continue to provide a major portion of the financial support for higher education. A continuance of this arrangement will ensure that no single source of aid (e.g. the Federal Government) will predominate.

5. *Strengthening graduate education and institutional research and the public service capabilities of higher education institutions*

Together with a continued *expansion* of research support, the recommended additions would help to correct some of the imbalances caused by the project grant method. Further, the greatly expanded cost-of-education allowances and institutional development grants will provide flexible funds to improve graduate education.

While this report has not dealt with qualitative questions concerning which specific fields of graduate education, or what types of public service programs should receive additional support, these additional funds will give graduate institutions some additional flexibility so that they can determine how *they* can best respond to changing developments in our society.

6. *Encouraging the efficient use of resources in higher education*

The consolidation of categorical aid programs related to particular items, and a broadening of the definition of categories worthy of support, would promote the effective use of resources in higher education by insuring that the Federal Government does not provide incentives for the inefficient use of institutional funds. Funds for planning and evaluation provided in our consolidation of categorical aid proposal should enable institutions to make more effective use of their revenues.

Further, the emphasis on student aid combined with cost-of-education allowances and the proposed NSLB *might* provide some incentives for the effective use of resources by institutions, because they will presumably be more responsive to student needs (and thereby more effective) if they must compete for students who have the financial flexibility to choose among a greater number of institutions.

Appendix A: Statistical Tables
Relating to Institutional Finances,
Federal Funding for Higher Education,
and Enrollments and Graduations by
Ability and Socioeconomic Status.

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TABLE A-1

Current income of institutions of higher education by type of institution and source 1959–60 and 1965–66

Income source	All institutions				Public institutions				Private institutions			
	1959–60		1965–66		1959–60		1965–66		1959–60		1965–66	
	Amount (millions)	Percent distribution	Amount (millions)	Percent distribution	Amount (millions)	Percent distribution	Amount (millions)	Percent distribution	Amount (millions)	Percent distribution	Amount (millions)	Percent distribution
Tuition and fees	$1,161.8	20.0	$2,765.4	21.6	$332.0	10.1	$892.0	12.1	$829.8	32.7	$1,873.3	34.7
Federal Government—Total	1,040.9	17.9	2,671.9	20.9	546.4	16.7	1,375.1	18.6	494.4	19.5	1,296.6	23.9
Organized research	(828.7)	(14.3)	(2,037.8)	(15.9)	(363.5)	(11.1)	(894.8)	(12.1)	(465.2)	(18.3)	(1,142.9)	(21.1)
All other Federal	(212.2)	(3.6)	(634.1)	(5.0)	(182.9)	(5.6)	(480.3)	(6.5)	(29.2)	(1.2)	(153.7)	(2.8)
State government	1,389.3	23.9	3,032.0	23.6	1,353.1	41.3	2,946.8	39.8	36.1	1.4	85.3	1.6
Local government	151.7	2.6	318.2	2.5	147.3	4.5	310.8	4.2	4.5	0.2	7.4	0.1
Endowment earnings	206.7	3.6	318.5	2.5	19.7	0.6	30.2	0.4	187.0	7.4	288.3	5.3
Private gifts and grants	383.2	6.6	650.6	5.1	85.5	2.6	159.8	2.2	297.7	11.7	490.8	9.1
Auxiliary enterprises	1,006.0	17.3	2,115.8	16.5	545.0	16.6	1,185.9	16.0	461.0	18.2	929.9	17.2
Student aid income (grants)	94.2	1.6	244.6	1.9	41.9	1.3	118.6	1.6	52.3	2.1	126.0	2.3
Other	379.1	6.5	688.5	5.4	205.8	6.3	378.4	5.1	173.5	6.8	310.1	5.8
Total current income	5,812.8	100.0	12,805.5	100.0	3,276.6	100.0	7,397.7	100.0	2,536.1	100.0	5,407.8	100.0
	Private universities				Private other 4- year				Private 2-year			
Tuition and fees	339.0	28.0	705.0	28.1	449.1	36.2	1,066.7	39.4	41.8	48.1	101.6	53.0
Federal Government—Total	327.8	27.1	792.7	31.6	165.6	13.4	500.5	18.5	1.0	1.1	3.5	1.8
Organized research	(305.0)	(25.2)	(678.6)	(27.1)	(159.5)	(12.9)	(463.1)	(17.1)	(0.7)	(0.8)	(1.3)	(0.7)
All other Federal	(22.8)	(1.9)	(114.1)	(4.5)	(6.1)	(0.5)	(37.4)	(1.4)	(0.3)	(0.3)	(2.2)	(1.1)
State government	29.6	2.4	71.6	2.9	6.5	0.5	13.2	0.5	0.1	[1]	0.5	0.2
Local government	2.8	0.2	4.3	0.2	1.6	0.1	3.2	0.1	0.1	[1]	0	0
Endowment earnings	98.0	8.1	162.9	6.5	86.7	7.0	121.9	4.5	2.2	2.6	3.4	1.8
Private gifts and grants	116.4	9.7	208.8	8.3	169.1	13.7	262.2	9.7	12.2	14.1	19.7	10.3
Auxiliary enterprises	153.4	12.7	302.6	12.0	280.2	22.7	571.1	21.1	27.4	31.7	56.2	29.3

[1] Less than 0.1 percent.

TABLE A-1—Continued

Current income of institutions of higher education by type of institution and source 1959–60 and 1965–66

Income source	Private universites				Private other 4-year				Private 2-years			
	1959–60		1965–66		1959–60		1965–66		1959–60		1965–66	
	Amount (millions)	Percent distribution	Amount (millions)	Percent distribution	Amount (millions)	Percent distribution	Amount (millions)	Percent distribution	Amount (millions)	Percent distribution	Amount (millions)	Percent distribution
Student aid income (grants)	26.4	2.2	71.0	2.8	25.4	2.0	53.0	2.0	0.5	0.6	2.1	1.1
Other	116.6	9.6	192.2	7.6	55.1	4.4	113.1	4.2	1.6	1.8	4.8	2.5
Total current income	1,210.0	100.0	2,511.1	100.0	1,239.2	100.0	2,704.9	100.0	86.9	100.0	191.7	100.0
	Public universities				Public other 4-year				Public 2-year			
Tuition and fees	211.3	9.5	536.3	10.9	96.8	11.9	262.1	14.8	23.9	10.6	93.6	13.4
Federal Government—Total	455.2	20.4	1,159.9	23.6	88.1	10.8	186.6	10.5	3.2	1.4	28.6	4.1
Organized research	(350.2)	(15.7)	(856.6)	(17.4)	(13.3)	(1.6)	(37.9)	(2.1)	(0.1)	(0)	(0.3)	(0)
All other Federal	(1[illegible]5.0)	(4.7)	(303.3)	(6.2)	(74.8)	(9.2)	(148.7)	(8.4)	(3.1)	(1.4)	(28.3)	(4.1)
State government	894.6	40.0	1,860.1	37.7	392.5	48.1	847.1	47.8	66.1	29.4	239.5	34.3
Local government	26.4	1.2	29.3	0.6	22.3	2.7	43.9	2.5	98.6	43.8	237.6	34.1
Endowment earnings	18.2	0.8	26.9	0.5	1.1	0.1	2.2	0.1	0.4	0.2	1.1	0.2
Private gifts and grants	78.6	3.5	142.9	2.9	5.9	0.7	15.5	0.9	1.0	0.4	1.4	0.2
Auxiliary enterprises	348.9	15.6	784.0	15.9	168.6	20.6	347.2	19.6	27.4	12.2	54.7	7.9
Student aid income (grants)	24.5	1.1	90.0	1.8	16.2	2.0	23.8	1.3	1.2	0.5	4.9	0.7
Other	177.4	7.9	299.6	6.1	25.1	3.1	43.2	2.5	3.2	1.5	35.6	5.1
Total current income	2,235.0	100.0	4,928.9	100.0	816.6	100.0	1,771.6	100.0	225.0	100.0	697.2	100.0

SOURCE.—U.S. Office of Education, *Financial Statistics of Institutions of Higher Education, 1959–60*, U.S. GPO, Washington: 1964; U.S. Office of Education, National Center for Educational Statistics, unpublished data from Higher Education General Information Survey, 1965–66.

TABLE A-2

Average annual percentage increase in current income from selected sources 1959–60 to 1965–66

Type of institution	Total income	Tuition and fees	Organized research (Federal)	Other Federal	State government	Local government	Endowment earnings	Private gifts and grants	Auxiliary enterprises
All Institutions	14. 1	15. 6	16. 2	20. 9	13. 9	13. 1	7. 5	9. 2	13. 2
Public	14. 5	17. 9	16. 2	17. 5	13. 9	13. 3	7. 4	11. 0	13. 8
Private	13. 5	14. 5	16. 2	31. 9	15. 4	8. 9	7. 5	8. 7	12. 4
Public:									
Universities	14. 1	16. 8	16. 1	19. 4	13. 0	(1)	6. 7	10. 5	14. 4
Other 4-year	13. 8	18. 1	19. 1	12. 1	13. 7	11. 9	12. 3	17. 3	12. 8
Two-year	20. 7	25. 6	(1)	44. 2	23. 9	15. 8	18. 4	6. 2	12. 2
Private:									
Universities	12. 9	13. 0	14. 3	30. 8	15. 8	7. 3	8. 8	10. 2	12. 0
Other 4-year	13. 9	15. 5	19. 4	35. 1	12. 6	12. 7	5. 8	7. 6	12. 6
Two-year	14. 1	16. 0	(1)	40. 6	(1)	(1)	7. 4	8. 3	12. 8

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[1] The change in this income source is not particularly relevant for this type of institution.

TABLE A–3

Average annual percentage increase in current income per student 1959–60 to 1965–66

Type of institution	Total income	Tuition and fees	Organized research (Federal)	Other Federal	State govern-ment	Local govern-ment	Endowment earnings	Private gifts and grants	Auxiliary enterprises
All Institutions	5. 5	7. 0	7. 6	12. 3	5. 3	4. 5	−1. 1	0. 6	4. 6
Public	4. 0	7. 4	5. 7	7. 0	3. 4	2. 8	−3. 1	0. 5	3. 3
Private	8. 1	9. 1	10. 8	26. 5	10. 0	3. 5	2. 1	3. 3	7. 0
Public:									
Universities	4. 3	7. 0	6. 3	9. 6	3. 2	(1)	−3. 1	0. 7	4. 6
Other 4-year	3. 6	7. 9	8. 9	1. 9	3. 5	1. 7	2. 1	7. 1	2. 6
Two-year	7. 8	12. 7	(1)	31. 3	11. 0	2. 9	5. 5	−6. 7	−0. 7
Private:									
Universities	9. 0	9. 1	10. 4	26. 9	11. 9	3. 4	4. 9	6. 3	8. 1
Other 4-year	8. 1	9. 7	13. 6	29. 3	6. 8	6. 9	0. 0	1. 8	6. 8
Two-year	2. 5	4. 4	(1)	29. 0	(1)	(1)	−4. 2	−3. 3	1. 2

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[1] The change in this income source is not particularly relevant for this type of institution.

TABLE A-4

Federal funds for higher education purposes

(Obligations in thousands)

Date funding started	Program and agency	1958	1960	1963	1966	1967	1968 (estimated)
	Total	1, 383, 753	1, 591, 373	2, 523, 524	4, 968, 592	5, 594, 656	5, 870, 473
	R&D Universities	282, 000	449, 000	855, 300	1, 326, 700	1, 443, 800	1, 448, 500
	R&D University-managed centers	196, 000	333, 800	642, 000	640, 200	657, 400	698, 200
	Facilities and equipment	*288, 119*	*211, 950*	*331, 373*	*1, 193, 644*	*1, 222, 606*	*986, 309*
1966	Higher Education Facilities Act, OE	-------	-------	--------	626, 807	720, 803	476, 526
	Facilities grants	-------	-------	--------	(522, 082)	(507, 053)	(307, 452)
	Construction loans	-------	-------	--------	(100, 977)	(202, 629)	(159, 330)
	State administration and planning	-------	-------	--------	(1, 755)	(6, 319)	(7, 000)
	Technical services	-------	-------	--------	(1, 993)	(2, 679)	(2, 744)
	Major disaster areas	-------	-------	--------	----------	(2, 123)	---------
1966	Library resources, OE/PHS	-------	-------	--------	8, 409	27, 951	28, 739
1966	Undergraduate instructional equipment, OE	-------	-------	--------	14, 872	14, 406	14, 500
1966	Research facilities and equipment, OE	-------	-------	--------	1, 312	307	1, 200
1965	Health education facilities, PHS	-------	-------	--------	76, 211	131, 524	135, 400
	Health Research facilities, PHS	30, 000	30, 039	50, 002	56, 266	40, 420	38, 400
1966	University-affiliated facilities for mentally retarded, SRS.	-------	-------	--------	7, 020	16, 105	2, 151
	Gallaudet College-Howard University, HEW	2, 622	592	2, 543	1, 681	9, 312	11, 669
	Nuclear training equipment, AEC	NA	1, 088	1, 875	645	889	860
	Research facilities and equipment, NSF	11, 644	12, 322	22, 902	19, 378	16, 671	18, 500

TABLE A-4—Continued

Federal funds for higher education purposes

(Obligations in thousands)

Date funding started	Program and agency	1958	1960	1963	1966	1967	1968 (estimated)
	College housing loans, HUD	243, 853	167, 909	252, 591	372, 971	236, 898	250, 000
	State marine schools, Commerce	--------	--------	5	8	2	----------
1964	Agriculture research facilities, Agriculture	--------	--------	--------	64	408	1, 274
	Canal Zone College, DOD	NA	NA	NA	150	42	90
1960	Center for cultural and technical interchange, State.	--------	--------	1, 455	---------	250	----------
1965	Specialized facilities, NASA	--------	--------	--------	7, 850	6, 518	7, 000
	Institutional grants	*11, 688*	*19, 495*	*80, 374*	*185, 714*	*241, 961*	*286, 449*
1966	Developing institutions, OE	--------	--------	--------	5, 000	30, 000	30, 000
	Land-grant college instruction, OE	5, 052	5, 052	14, 500	14, 500	14, 500	14, 500
1966	Strengthening graduate schools, OE	--------	--------	--------	5, 000	5, 000	7, 500
1966	Health training, PHS	--------	--------	--------	48, 318	51, 157	78, 925
	Teaching grants, SRS	2, 106	3, 036	6, 559	11, 060	12, 574	12, 530
	Howard University-Gallaudet College, HEW	4, 530	5, 521	9, 414	13, 496	16, 076	18, 412
1966	National Technical Institute for the Deaf, HEW	--------	--------	--------	323	491	1, 979
	State merchant marine schools, Commerce	NA	1, 138	1, 431	1, 000	675	875
	Canal Zone College, DOD	NA	NA	NA	750	757	800
1961	Center for cultural and technical interchange, State.	--------	--------	1, 460	2, 000	2, 100	1, 956
	Institutional development grants, NSF	--------	3, 153	44, 329	78, 376	79, 723	85, 000
1967	National sea grant program, NSF	--------	--------	--------	---------	1, 000	4, 000
1967	Computer activities support grants, NSF	--------	--------	--------	---------	20, 900	23, 000

	Language and area centers, OE	--------	1, 595	2, 650	5, 080	6, 086	5, 830
	Handicapped program, OE	--------	--------	31	811	922	1, 142
	Training grants	*46, 600*	*120, 300*	*201, 531*	*337, 335*	*369, 776*	*392, 514*
1959	Institutes for teachers, OE	--------	2, 521	7, 250	41, 438	36, 336	39, 750
1966	Research training, OE	--------	--------	--------	7, 278	6, 481	6, 750
1966	Librarian training, OE	--------	--------	--------	899	3, 733	8, 250
	College teacher training, OE	--------	--------	--------	--------	2, 500	2, 500
1965	Civil rights institutes, OE	--------	--------	--------	3, 413	2, 651	2, 930
1964	Language and area studies, OE	--------	--------	--------	752	752	684
	National Institute of Mental Health, PHS	13, 287	26, 197	49, 117	82, 822	90, 422	100, 762
	National institutes of health, PHS	19, 298	48, 476	86, 385	126, 441	134, 403	137, 856
1966	National Library of Medicine, PHS	--------	--------	--------	465	812	1, 143
	Maternal and child health and welfare, SRS [1]	NA	1, 586	3, 517	5, 000	9, 495	12, 700
1962	Juvenile delinquency program, training grants, SRS.	--------	--------	947	1, 997	3, 000	----------
1961	Cuban refugee assistance, OE/WA	--------	--------	175	300	400	600
1966	Teacher Corps training, OE	--------	--------	--------	6, 221	3, 679	2, 610
1962	Water supply and pollution control, Interior	--------	--------	1, 100	2, 500	2, 867	3, 300
1965	Teacher training, OEO	--------	--------	--------	2, 100	16, 422	15, 000
	Teacher training, AEC	1, 248	1, 195	1, 013	900	1, 000	1, 000
1966	Law enforcement training, Justice	--------	--------	--------	50	1, 280	3, 000
	Disease and environmental control, PHS [2]	--------	--------	394	2, 616	4, 200	5, 522
	Community health, PHS	NA	NA	NA	401	500	800
	Institutes and conferences, NSF	12, 212	33, 717	41, 804	41, 400	37, 000	38, 330
	Other training grants, NSF	555	6, 608	9, 939	9, 800	10, 700	8, 123
	Handicapped program, OE	--------	--------	--------	542	1, 143	904
	Fellowships and traineeships	*14, 920*	*47, 589*	*113, 906*	*256, 335*	*307, 959*	*319, 966*
1964	Foreign language and area studies, OE	--------	--------	--------	1, 814	1, 814	1, 911
1959	Language development, OE	--------	1, 675	3, 517	6, 120	6, 870	6, 870
1959	NDEA graduate, OE	--------	12, 570	20, 702	55, 824	80, 842	86, 600

TABLE A-4—Continued

Federal funds for higher education purposes

(Obligations in thousands)

Date funding started	Program and agency	1958	1960	1963	1966	1967	1968 (estimated)
1966..	Teacher fellowships, OE	------	--------	-------	14, 992	24, 920	27, 500
	Disease and environmental control, PHS	------	--------	59	385	452	591
	Health manpower grants, PHS	------	--------	-------	18, 162	18, 273	22, 703
	National Institute of Mental Health, PHS	561	1, 996	5, 940	8, 362	9, 123	10, 155
	National Institute of Health, PHS	5, 873	12, 590	29, 619	45, 454	48, 650	55, 091
	Rehabilitation fellowships and traineeships, SRS	2, 264	3, 161	6, 710	13, 532	17, 126	19, 170
	Nuclear traineeships, AEC	620	1, 180	1, 900	3, 355	4, 719	4, 993
1962..	Water supply and pollution control, Interior	------	--------	282	710	633	700
1966..	Urban planning, HUD	------	--------	-------	500	500	500
	Fellowships and traineeships, NSF	5, 602	13, 432	21, 678	44, 485	57, 755	59, 800
	Fisheries scientist, Interior	------	--------	195	200	200	200
	Center for cultural and technical interchange, State.	------	--------	5, 425	3, 800	3, 700	3, 264
	Community health, OE	------	--------	-------	97	150	250
	Handicapped program, OE	------	985	2, 455	13, 253	17, 105	17, 438
	Fellowships and traineeships, NASA	------	--------	15, 424	25, 290	15, 127	2, 230
	Undergraduate student support	*410*	*41, 039*	*91, 217*	*345, 175*	*374, 242*	*494, 890*
1966..	Educational opportunity grants, OE	------	--------	-------	57, 923	108, 773	133, 027
1966..	Insured loans, OE [3]	------	--------	-------	2, 712	13, 996	38, 239
1959..	Student loan program, OE [4]	------	40, 382	90, 480	179, 285	179, 120	184, 400
1965..	Work study, OE	------	--------	-------	99, 966	67, 000	134, 000
	State marine school students, Commerce	410	657	737	886	918	904

	Handicapped program undergraduate traineeships, OE.	-------	--------	--------	4, 403	4, 435	3, 820
	Other student support	*449, 061*	*267, 362*	*101, 569*	*430, 109*	*722, 338*	*982, 329*
	Veteran's education	434, 700	248, 600	68, 400	29, 796	250, 515	412, 351
	Cuban refugee assistance, OE	-------	--------	1, 300	3, 300	3, 800	4, 100
1965	Health professions student loans, PHS [5]	-------	--------	--------	15, 600	25, 325	26, 659
1967	Health professions scholarships, PHS [6]	-------	--------	--------	3, 808	7, 198	11, 219
1965	Social security benefits to students	-------	--------	--------	296, 000	342, 000	432, 000
	Employee training in educational institutions	14, 361	18, 762	31, 869	81, 605	94, 000	96, 000
	Federal schools	*41, 075*	*47, 123*	*43, 246*	*160, 902*	*157, 565*	*158, 220*
	Merchant Marine Academy, Commerce	2, 407	3, 069	3, 289	4, 683	4, 559	4, 720
	Coast Guard Academy, Transportation	4, 068	4, 256	4, 256	10, 911	9, 443	10, 000
	Military academies, DOD	34, 600	38, 386	34, 923	138, 000	135, 000	135, 000
	Special schools and courses, AEC	NA	1, 412	778	3, 400	3, 800	3, 800
	Vista training, OEO	-------	--------	--------	3, 908	4, 763	4, 700
	Other	*53, 880*	*53, 715*	*63, 008*	*92, 478*	*96, 509*	*103, 596*
1966	Technical services and assistance, Commerce	-------	--------	--------	300	382	1, 936
1966	University community services, OE	-------	--------	--------	9,239	9,755	10,000
1966	Rehabilitation Center, HEW/SRS	-------	--------	--------	7,570	8,575	10,225
	Agriculture extension, Agriculture	53,880	53,715	63,008	75,369	77,797	81,435

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[1] This program was transferred from Social Security to SRS. The SRS figures start in 1963.

[2] Disease and environmental control includes chronic diseases, communicable diseases, air pollution, environmental engineering and sanitation, and radiological health.

[3] Studies made in 1966 and 1967 show that 9.6 percent of the total loans made were to graduate students and the remaining 90.4 percent were made to undergraduates.

[4] A study was made in 1967 pertaining to the amount of loans made to graduate and undergraduate students. It was found that 8 percent of the amount of loans were made to graduate students.

[5] [6] These programs are for graduate level work.

TABLE A-5

Federal funding of higher education purposes by Agency

(Amounts in thousands—Research excluded)

	1958	1960	1963	1966	1967	1968
HEW	85, 593	197, 974	394, 266	2, 034, 552	2, 393, 380	2, 439, 132
OE	(5, 052)	(64, 780)	(143, 060)	(1, 191, 465)	(1, 396, 017)	(1, 292, 820)
PHS	(69, 019)	(119, 298)	(221, 516)	(485, 405)	(562, 609)	(625, 476)
SRS	(4, 370)	(7, 783)	(17, 733)	(46, 179)	(66, 875)	(56, 776)
SSA				(296, 000)	(342, 000)	(432, 000)
NSF	30, 013	69, 232	140, 642	193, 439	223, 749	236, 753
VA	434, 700	248, 600	68, 400	29, 796	250, 515	412, 351
DOD	34, 600	38, 386	34, 923	138, 900	135, 799	135, 890
HUD	243, 853	167, 909	252, 591	373, 471	237, 398	250, 500
Other	76, 994	86, 472	135, 502	231, 534	252, 745	249, 147
Total of nonresearch funds	905, 753	808, 573	1, 026, 224	3, 001, 692	3, 493, 456	3, 723, 773

TABLE A-6

Federal funding of higher education purposes by Agency

(Percentage distribution—Research excluded)

	1958	1960	1963	1966	1967	1968
HEW	9. 45	24. 48	38. 42	67. 78	68. 51	65. 50
OE	(0. 56)	(8. 01)	(13. 94)	(39. 69)	(39. 96)	(34. 72)
PHS	(7. 62)	(14. 75)	(21. 59)	(16. 17)	(16. 10)	(16. 80)
SRS	(0. 48)	(0. 96)	(1. 73)	(1. 54)	(1. 91)	(1. 52)
SSA				(9. 86)	(9. 79)	(11. 60)
NSF	3. 31	8. 56	13. 70	6. 44	6. 40	6. 36
VA	47. 99	30. 75	6. 67	0. 99	7. 17	11. 07
DOD	3. 82	4. 75	3. 40	4. 63	3. 89	3. 65
HUD	26. 93	20. 77	24. 61	12. 44	6. 80	6. 73
Other	8. 50	10. 69	13. 20	7. 72	7. 23	6. 60
Total of nonresearch funds	100. 00	100. 00	100. 00	100. 00	100. 00	100. 00

TABLE A–7

Percent change in Federal funding by category and total

	1958–63	1963–68	1958–68
Total	82	136	331
Research and development universities	203	81	449
Research and development university managed centers	227	8	256
Facilities and equipment	15	197	242
Institutional grants	587	256	2, 350
Training grants	332	94	742
Fellowships and traineeships	663	180	2, 044
Undergraduate student support	(1)	442	(1)
Other student support	−342	861	118
Federal schools	5	265	285
Other	16	64	92

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(1) During both of these periods, Federal support increased more than one hundredfold.

TABLE A–8

Probability of failure to complete high school by socioeconomic status and ability[1]

		Ability				
		High (1)	(2)	(3)	Low (4)	
High	(1)	1. 4	2. 0	6. 5	13. 5	3. 2
SES	(2)	2. 0	4. 4	8. 6	17. 4	8. 1
	(3)	3. 2	5. 7	11. 9	21. 6	10. 4
Low	(4)	5. 6	10. 8	15. 2	28. 8	19. 0
		2. 5	6. 0	12. 5	25. 2	

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[1] Socioeconomic status is a composite variable which includes parental income, father's education, and several other factors. Ability is also a composite variable determined by several test scores and other factors.

Source.—Project TALENT 1-year followup surveys of 1960 high school students.

TABLE A–9

Probability of entrance to college, full or part-time, in the year of high school graduation, by socioeconomic status and family size

Size of family	SES			
	(High) 1	2	3	(Low) 4
2–4	68. 7	43. 1	31. 1	16. 3
5–6	62. 8	38. 7	26. 4	14. 1
7–8	55. 1	34. 8	20. 0	10. 6
9–11	53. 4	26. 0	20. 5	10. 6
12 or more	41. 2	25. 5	10. 8	7. 4

TABLE A–10

Distribution (percent) of freshmen entering 4-year public and private colleges, in the year of high school graduation, full-time and degree credit, by socioeconomic status and ability

Ability	SES				
	(High) 1	2	3	(Low) 4	
1 (High)	20. 5	12. 2	8. 0	2. 4	43. 1
2	10. 3	8. 0	5. 9	2. 5	26. 7
3	5. 7	4. 8	3. 5	2. 0	16. 0
4	2. 0	2. 5	2. 3	1. 6	8. 4
5 (Low)	1. 0	1. 1	1. 7	2. 0	5. 8
	39. 5	28. 6	21. 4	10. 5	

SOURCE.—Project TALENT, 5-year followup surveys.

TABLE A–11

Distribution (percent) of freshmen entering 4-year private institutions of higher education in the year of high school graduation, full-time and degree credit only, by ability and socioeconomic status

	SES				
Ability	(High) 1	2	3	(Low) 4	
1 (High)	27.2	11.5	7.3	2.1	48.1
2	10.3	6.7	5.4	2.1	24.5
3	5.5	4.2	2.8	1.5	14.0
4	2.4	2.6	1.4	1.1	7.5
5 (Low)	.7	1.6	.9	1.7	4.9
	46.1	26.6	17.8	8.5	

TABLE A–12

Distribution (percent) of freshmen entering 4-year public institutions of higher education, in the year of high school graduation, full-time and degree credit only, by socioeconomic status and ability

	SES				
Ability	(High) 1	2	3	(Low) 4	
1 (High)	16.0	12.6	8.4	2.5	39.5
2	10.3	8.8	6.2	2.7	28.0
3	5.8	5.2	3.8	2.2	17.0
4	1.7	2.3	2.7	1.8	8.5
5 (Low)	1.1	.6	2.2	2.1	6.0
	34.9	29.5	23.3	11.3	

SOURCE.—Project TALENT, 5-year followup surveys.

TABLE A–13

Distribution (percent) of freshmen entering all 2-year colleges, in the year of high school graduation, full-time and degree credit, by socioeconomic status and ability

Ability	SES				
	(High) 1	2	3	(Low) 4	
1 (High)	3. 9	6. 3	4. 7	3. 4	18. 3
2	9. 2	8. 2	7. 5	4. 1	29. 0
3	9. 7	4. 8	7. 2	4. 1	25. 8
4	3. 9	4. 2	5. 9	2. 4	16. 4
5 (Low)	1. 9	1. 7	4. 1	2. 6	10. 3
	28. 6	25. 2	29. 4	16. 6	

SOURCE.—Project TALENT, 5-year followup surveys.

TABLE A–14

Distribution (percent) of freshmen entering college, in the year of high school graduation, full-time and degree credit, by type and control of institution and by socioeconomic status and ability

Ability	Socioeconomic status												Total
	1st quartile			2nd quartile			3rd quartile			4th quartile			
	4-year		2-year	4-year		2-year	4-year		2-year	4-year		2-year	
	Public	Private		Public	Private		Public	Private		Public	Private		
(High) I	8. 8	9. 9	. 3	7. 0	4. 2	. 5	4. 7	2. 7	. 4	1. 4	. 8	. 3	41. 1
II	5. 8	3. 8	. 7	4. 9	2. 4	. 6	3. 4	2. 0	. 6	1. 5	. 8	. 3	27. 0
III	3. 2	2. 0	. 8	2. 9	1. 5	. 4	2. 1	1. 0	. 6	1. 3	. 6	. 3	16. 8
IV	. 9	. 9	. 3	1. 3	1. 0	. 3	1. 5	. 5	. 5	1. 0	. 4	. 2	9. 0
(Low) V	. 6	. 3	. 1	. 3	. 6	. 1	1. 2	. 3	. 3	1. 2	. 6	. 2	6. 1
Total	19. 3	16. 9	2. 2	16. 4	9. 7	1. 9	12. 9	6. 5	2. 4	6. 4	3. 2	1. 3	100. 0

SOURCE.—Project TALENT, 5-year followup surveys.

TABLE A–15

Probability of freshmen who enter college (full-time) in the year of high school graduation, receiving a bachelor's degree after 4 years, by ability and socioeconomic status

Ability	SES			
	(High) 1	2	3	(Low) 4
1 (High)	78. 1	63. 0	66. 4	65. 9
2	59. 1	55. 9	56. 8	65. 3
3	47. 7	51. 6	47. 0	54. 1
4	43. 9	35. 3	37. 0	38. 3
5 (Low)	30. 4	44. 8	23. 4	28. 7

TABLE A–16

Probability of students with bachelors' degrees entering graduate school in year after receipt of degree, by ability and socioeconomic status

Ability	SES			
	(High) 1	2	3	(Low) 4
1 (High)	54. 0	50. 6	41. 8	30. 5
2	41. 7	40. 8	29. 4	49. 2
3	43. 1	39. 6	33. 7	17. 6
4*	39. 6	25. 7	30. 2	24. 5
5* (Low)	45. 8	14. 0	33. 3	12. 8

*The number of observations in these cells is very small.

SOURCE.—Project TALENT, 5-year followup surveys.

Appendix B

Preliminary Estimates of Demand for Higher Education[1]

Private Demand for Higher Education and Federal Policy

Many factors are known to influence a young person's decision whether to continue his education beyond high school. It is well known that family income, parental educational achievement, employment opportunities in the surrounding community, wage levels, and a host of other personal and social factors are important determinants of levels of college attendance, as well as such factors as tuition, living costs, transportation charges, and other direct dollar outlays. This study focuses attention on the impact of tuition charges on college attendance. The results, presented in the following section, provide estimates of the effect that different levels of cost to students would have on college and junior college attendance. In addition, we have tried to answer the following questions:

1. How does the response to tuition reductions vary with family income?
2. How does the response to tuition reductions vary with student ability?
3. How do college tuition levels affect a high school student's decision to finish school?
4. What would be the effect of reducing tuition on attendance at private as opposed to public institutions?

Predictions of the response to a reduction in overall tuition levels and to reductions directed at specific groups are useful in designing an efficient subsidy program to induce college attendance by those individuals who are the focus of national concern. Perhaps more important, these predictions can help to avoid the error of instituting a subsidy program which requires large Federal outlays but does not achieve the desired objective.

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[1] This paper presents in summary form the preliminary results of a study on the demand for higher education performed under the sponsorship of the Office of the Assistant Secretary for Planning and Evaluation, U.S. Department of Health, Education, and Welfare. The research was done at the Institute for Defense Analyses by Mr. Paul Feldman and Dr. Stephen A. Hoenack of the Program Analysis Division of IDA, with the assistance of Miss Eloise Hally and Mr. Royce Kneece, Jr.

Preliminary Results

A. *Brief description of the model*[2]

Our model examines how variations among the States in tuition charges and other relevant factors affect enrollment. The jointly dependent variables are proportions of 10th grade high school male students who:

attend any college giving degree credit courses
attend any public or private junior college
attend any public 4-year university
attend any private 4-year university
enter military service
enter the civilian labor force and do not attend college

The independent variables include:

tuition at each type of institution
labor market variables: earnings and unemployment rates
performance on intelligence tests
paternal education (used as a proxy for family income)

The source of all dependent variables and all independent variables except tutition, earnings, and employment rates are Project TALENT. The tuition data were obtained from the Office of Education.

B. *Estimated overall price responsiveness of college students*

Cross-section demand equations were estimated for 1963. For all income groups combined, we have found that a $100 increase (decrease) in tuition in 1963, at all colleges, would reduce (increase) the proportion of 10th graders who will attend college by 0.055. Adjusting for price level changes since 1963, a $100 increase in 1968 dollars would lead to a change of approximately 0.05 in the proportion attending college. This value varies somewhat at different levels of college costs; that is to say, the demand for higher education is not a linear function of tuition.

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[2] A detailed description of a similar model is in Stephen A. Hoenack, *Private Demand for Higher Education in California*, (Ph. D. dissertation, University of California, Berkeley, 1967).

C. *Estimated effect of family income on responsiveness of enrollments to tuition*

In the range of parental income levels between $6,000 and $12,000, we estimate that the change in the proportion of 10th graders going to college per $100 change in college costs is 0.008 per $1,000 increase in family income. Thus, the effect of tuition changes on the proportion attending college is considerable, but less at $12,000 income than at $6,000. Our evidence on price responsiveness at family income levels below $6,000 and above $12,000 is not sufficiently refined to be presented at this time.

D. *Preliminary estimates of the composition of the changes in enrollments resulting from a change in the overall level of tuition*

We estimate that if there were an increase in the level of tuition at all types of colleges, the share of the loss in aggregate enrollments would be 19 percent for junior colleges; for 4-year public colleges and universities, 57 percent; and for 4-year private colleges and universities, 24 percent. The higher tuition induced reduction in attendance for each type of college varies by income: Our preliminary estimates indicate that as income rises, the proportions dropping out of junior colleges decline relative to the similar proportions for 4-year institutions. At the same time, a larger proportion of higher income students transfer from 4-year colleges to junior colleges. Furthermore, as tuitions increase, approximately equal percents of the decrease in enrollments would enter the military and the civilian labor force. The proportion of tuition induced dropouts who go into the military decreases as income increases.

E. *Estimated effect of student ability on responsiveness of enrollments to college costs*

The results of test scores were used to stratify our sample by student capability. Five sample groups were constructed based on the distribution of test scores nationally. Our preliminary findings follow:

We estimate that students in the highest 15 percentile are insensitive to tuition changes in determining whether or not to attend college, within the range of the observed data, while for students in the 75–84 percentile group, sensitively to price is such that a $100 increase in tuition over all schools would decrease the proportion of 10th graders who will attend college by 0.08. This change would be absorbed completely by public and private 4-year colleges. Students choosing not to go to junior colleges because of a price increase would be offset by students shifting from 4-year colleges. The major losses would be in the public colleges for which the proportion attending would fall by 0.06. For students in the 50–74 percentile group, we estimate that a $100 change in tuition over all schools would change the proportion of 10th graders who will attend college by 0.08, but the distribution of dropouts would differ from the higher ability group. Whereas only 4-year institutions would lose students from the higher percentile groups, in the 50–75 percentile group, junior colleges as well as 4-year colleges would suffer losses. For students falling below the median level in ability, a change of $100 in tuition at *junior colleges* would lead to a change of 0.016 in the proportion attending.

F. *Other preliminary results*

Our preliminary estimates suggest that high school graduation rates (expressed as proportions) are increased by 0.007 per $100 decrease in the overall level of tuition. This value varies substantially with income. It nearly vanishes at $7,300 and increases by approximately 0.016 per $1,000 decrease in income below $7,300. These results reflect the obvious fact that students do their academic planning early in their high school careers.

Furthermore, it was found that unemployment rates positively effect high school graduation and college attendance, while military experience is positively affected by tuition and increasingly so at lower incomes.

Appendix C

The Educational Opportunity Bank ("Zacharias Plan")

One of the most interesting and much discussed proposals for student assistance in recent years resulted from a panel headed by Professor J. Zacharias from MIT.[1] This panel proposed development of an Educational Opportunity Bank (EOB) to loan money to students for their college educations. Students who borrowed money from the Educational Opportunity Bank would agree to repay a fixed percentage of their personal incomes. Thus, a student with low income would pay back less than the money he borrowed; a student with a larger income, paying back the same percentage of his income, would pay back more than the amount he borrowed to attend college. As an individual's income varied from year to year, so would his repayments to the bank.

One of the main reasons for the EOB proposal was an attempt to find a funding solution which "mutualized" the riskiness of college investment decisions. It was felt, by members of the Zacharias panel, that the currently available loan programs (which had a set and required repayment schedule) discouraged individuals with low income expectations or who expected to enter low income professions from borrowing money in order to attend college. Students who were risk averters would also be discouraged from borrowing funds for college under fixed repayment schemes because of the high "disutility" of fixed repayment amounts during low income years. The panel also felt that certain groups of potential college students might significantly underestimate their potential future earnings. These groups would tend to invest less in college education than was, in fact, optimal.

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[1] *Educational Opportunity Bank.*—A report of the Panel on Educational Innovation to the U.S. Commissioner of Education, Director of the National Science Foundation, and Special Assistant to the President for Science and Technology (Washington, D.C., U.S. GPO, Aug. 1967).

One of the initial and major criticisms of the EOB program was that students with high income expectations would not join in the bank's program and thus, the bank would tend to be lending money to a group of students whose income expectations and potentials were characteristically below average.[2] Thus, a majority of the participants would not repay their entire loan amounts and the bank would, in fact, be a subsidized loan program.

In response to this criticism, an opt-out provision was designed which allowed any individual to limit his repayments to a level equivalent to a regular fixed interest rate loan. The "opt-out interest rate" would be set by the EOB at a level somewhat higher than the bank's interest costs. This rate would have to be set low enough to encourage potential high income earners to join, but high enough to provide the bank with a surplus to meet the losses on the loans to low earners.

Because of the contingent repayment scheme in the EOB program, a major benefit of the program is thought to be its mutualization of risk. In this way, one may consider the program to be somewhat parallel to a home or automobile insurance policy issued by an insurance firm. An insurance firm makes a profit or net positive yield because individuals do not have good knowledge on which to base their predicted accident or fire occurrences and because individuals will take small guaranteed losses (premiums) to avoid chance large losses (the result of an accident). However, if individuals and/or insurance firms can predict with some accuracy the attributes which had direct relationship to either high or low accident rates, the firms would attempt to charge more (or not sell insurance) to those individuals with predictably high accident rates; those individuals with predictably low accident rates would be sought actively by the insurance companies, but would be somewhat more hesitant to enter the insurance market. Thus, low-risk individuals would either have lower insurance rates or proportionately fewer of them would buy insurance. This situation directly parallels the problems which the Educational Opportunity Bank proposal confronts with respect to the income and ability distribution of those individuals who are likely to enter the loan market or bank.

Although the employment market for college-educated individuals is competitive, there are factors which an individual can use to estimate where in an earnings distribution his likely income will be. These factors include both ability and parental background. Because individuals probably do have reasonably good expectations about their expected income yields, a skewed distribution of entrants into the EOB loan fund can be almost guaranteed. The potential borrowers are more likely to be students from lower ability levels and from lower income groups if these attributes are correlated with lower income expectations. They are also more likely to be individuals who expect or plan to enter professions that are characteristically lower paying than the average professions entered by college graduates or attendees. Because of this skewed distribution of entrants, any attempt to make the Educational Opportunity Bank an unsubsidized loan program would demand that very high incremental repayment tax rates be charged to the loan program's participants. These high tax rates would, in addition to possibly distorting individuals' work-leisure decisions, tend to discourage potential borrowers from entering the EOB program unless no other alternatives were in existence.

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[2] Another early criticism of the EOB was that it would be unworkable in dealing with the earnings of married women. This problem has been ingeniously addressed in Karl Shell, et al, "The Educational Opportunity Bank: An Economic Analysis of a Contingent Repayment Loan Program for Higher Education," *National Tax Journal*, vol. XXI, pp. 1-45.

In view of the probable skewed distribution of EOB entrants, alternative devices for an improved capital market with long-term, low repayment schemes seem preferable. Appendix D describes a National Student Loan Bank with many of the desirable features of the EOB. Although the National Student Loan Bank does not provide for a total pooling of risk, it does incorporate a limited cancellation provision for low earners. These cancellations are to be financed through general tax revenues, rather than from "taxation" of successful EOB borrowers.

Appendix D

Discussion of Educational Opportunity Grant and National Student Loan Bank Proposals

1. THE SIZE OF GRANT UNDER THE EOG PROPOSAL

All students would be entitled to an annual sum equal to the difference between: (a) the national average college attendance cost; and (b) the family contribution plus expected student savings, plus 10 percent of effective family income, as defined below.

The maximum annual grant would be the lesser of: (a) $1,500; or (b) tuition and fees plus a minimum maintenance allowance as determined by the Commissioner of Education.

The minimum annual grant would be $200.

National Average College Attendance Cost would be the average of undergraduate tuition, fees, room and board charges at institutions of higher education (public and private, 4-year, 2-year, and university), as determined by the Commissioner of Education. This sum would be recomputed every 2 years or at shorter intervals if the Commissioner of Education determines this to be appropriate.

Family Contribution would conform to standards established by the Commissioner of Education and would incorporate such factors as effective family income and number of dependent children. Guidelines for Family Contributions would be established annually under the supervision of the Commissioner. The Commissioner would determine whether students are self-supporting.

Expected Student Savings would be such sum as the Commissioner of Education may determine accurately reflects the average student's expected savings from summer employment.

Effective income would be the annual income (including noncash benefits that the family may receive) minus: (a) Federal income tax paid; and (b) special categories of expenses arising from unusual circumstances as defined in the guidelines as approved by the Commissioner of Education.

TABLE D–1

Illustrations of the EOG program for 1, 2, 4, and 6 children families

—National average college attendance cost=$2,200
—Expected student savings=$300
—College scholarship service criteria of adjusted effective income and expected family contribution are used for illustrative purposes

Effective income	Opportunity grant			
	One	Two	Four	Six
0	$1, 500	$1, 500	$1, 500	$1, 500
$1, 000	1, 500	1, 500	1, 500	1, 500
2, 000	1, 500	1, 500	1, 500	1, 500
3, 000	1, 350	1, 500	1, 500	1, 500
4, 000	1, 280	1, 350	1, 500	1, 500
5, 000	770	1, 000	1, 150	1, 400
6, 000	400	650	1, 020	1, 200
7, 000	[1] 200	310	730	910
8, 000	--------------	[2] 200	430	610
9, 000	--------------	--------------	[3] 200	320
9, 800	--------------	--------------	--------------	200

[1] $200 grant at $6,500 effective income.
[2] $200 grant at $7,300 effective income.
[3] $200 grant at $8,700 effective income.

2. THE NATIONAL STUDENT LOAN BANK

General Purpose

To supplement educational opportunity grants, NDEA loans and Federal fellowship and traineeship support and to establish, on a uniform national basis, a stable source of funds to finance the costs of attending an institution of higher education, Congress would establish a National Student Loan Bank. The bank would raise capital through the sale of securities that would be guaranteed against default by the Federal Government and would lend, *at fixed interest rates*, to all eligible students sums sufficient to finance their higher education costs net of other forms of Federal aid. Loans shall extend up to 30 years, with provision for flexible repayment schedules. The Federal Government would pay all interest accrued during the period of enrollment; thereafter, the bank would set repayment schedules to cover all costs to the bank. The Federal Government would reimburse the bank for all loan defaults, death, disability, and, in a limited number of cases, would cancel repayments for borrowers with low earnings.

Nature of the Charter of the Bank

The bank would be a nonprofit corporation established by the Congress. It would not be an agency or instrumentality of the United States Government. The Congress would reserve the exclusive right to alter or amend its charter.

The bank would have a board of directors consisting of 20 members, one of whom would be elected annually by the board to serve as chairman. Congress would choose 15 members of the board. The persons so appointed would be representatives of higher education generally and representatives of banking and finance generally. The President of the United States would appoint five public members of the board, by and with the advice of the Senate. The board would elect the President and other officers of the Bank. There would be no limitations on who may purchase securities issued by the Bank, nor on the maturity of such securities.

Lending Authority of the Bank

Each student enrolled in (or admitted to) an eligible institution (as defined in sec. 116 of the Higher Education Amendments of 1968) would be eligible to borrow an annual sum not to exceed tuition and fees plus subsistence (including room and board charges) minus Federal aid receive in any of the following forms: (a) Educational opportunity grants; (b) NDEA loans; (c) Federal fellowships or traineeships.

Loans shall be available for up to 5 years of undergraduate study, and up to 5 years of graduate study, or the equivalent in part-time study.

Contractual Relationship; Repayment Terms

During the student's period of enrollment (and for up to 3 years of Peace Corps, VISTA, or military service), the Federal Government would pay interest to the bank on all outstanding principal at the average interest rate set at the time the loans were initiated.

At the end of the enrollment period, the borrower would enter the repayment period. At that time, the bank would consolidate all outstanding principal sums for each borrower and would establish a contractual repayment schedule. This schedule would extend for up to 30 years and would provide for: (a) an equal sum to be repaid in each year; or (b) a schedule of rising repayments to be devised by the bank. Choice of repayment schedules would be at the borrower's option, but (with the exceptions noted below) would not involve any further subsidy by the Federal Government.

Federal Subsidies

In the event of default, death, or disability, as defined in sec. 430 of the Higher Education Act of 1965, the Federal Government would pay to the bank the "amount of loss" as defined in that section.

In addition, the bank would establish, annually, a low earnings cancellation provision. This provision would provide for cancellation, in whole or in part, of annual repayment in any year in which the borrower's income fails to reach a minimum level or in which the repayment exceeds a maximum percentage of income. Schedules of minimum levels or maximum percentages would be established by the bank in such manner that: (a) in no year does the aggregate cancellation exceed 10 percent of total scheduled repayments to the bank; and (b) the distribution of cancellations be made equitable through limiting cancellations to those with the lowest earnings in each age, sex, and family size category.

Collection

The Internal Revenue Service would act as agent for the bank in collecting repayments. Upon completion of the repayment contract, the bank would forward to the Internal Revenue Service identifying information (taxpayer number) and the agreed-upon schedule of repayment. Thereafter, the Internal Revenue Service would collect repayments through annual or quarterly income tax forms and would remit all funds collected to the bank. In the event of a subsidy noted above, the Internal Revenue Service would certify the subsidy, bill the Federal Government, and remit the "amount of loss" or annual cancellation to the bank.

Initiation of Loans

The bank would establish regional offices or, when appropriate, would authorize financial institutions or institutions of higher education to act as agents of the bank in the initiation of loans. Furthermore, the bank would reimburse all outside agencies for administrative expenses incurred in the initiation of loans and administrative expenses incurred by institutions of higher education in certifying the eligibility of a prospective borrower.

Costs to the Federal Government

The Federal Government would be liable for all interest accrued during the enrollment period of each student borrower.

In addition, the Federal Government would be liable for default, death, and disability losses as well as the annual low earner cancellation provision.

Also, collection costs incurred by the Internal Revenue Service would be met from general revenues. Administrative costs of the bank would be borne by the bank after the initial year of operation. During the initial year of operation, the Federal Government would provide start-up costs. Further, it may be necessary in its early years, before payments reach a sizeable level, for the bank to borrow in part to meet the administrative expenses not recoverable from repayments.

If this program was initiated in fiscal year 1970, its cost would rise from about $200 million in fiscal year 1972, to about $740 million in fiscal year 1976.

In subsequent years, the interest cost will rise slowly, collection costs and cancellations due to death, etc., will rise moderately, and cancellations for low earnings will rise more rapidly, as repayments grow.

Illustrative Tables

A. REPAYMENT SCHEDULES

A student borrowing $2,500 for each of four undergraduate years will accumulate a debt of $10,000 at the time his repayment schedule is consolidated and the contractual obligation to the bank is completed. If he selects a 30-year, constant annual repayment schedule, his repayments at different assumed interest rates are as shown in table D-2:

TABLE D-2

Repayment obligations (30-year loan)

	5 percent	6 percent	7 percent
Total borrowed	$10, 000	$10, 000	$10, 000
Annual repayment	650	726	806
Approximate monthly repayment	54	60	67
First year repayment on a 10-year loan where borrower pays 10 percent of principal plus interest in first year	$1, 500	$1, 600	$1, 700

For a $10,000 loan, repayments based on a 15-year schedule of repayments are as shown in table D-3:

TABLE D-3

Repayment obligations (15 years)

	5 percent	6 percent	7 percent
Total borrowed	$10, 000	$10, 000	$10, 000
Annual repayment	963	1, 029	1, 097
Approximate monthly repayment	80	85	91

Annual repayments for loans illustrated above would represent the percentages of various income levels as shown in table D-4:

TABLE D-4

Annual repayment as a percent of income (6 percent loans)

	Annual income			
	$5,000	$7,500	$10,000	$15,000
30-year loan [1]	14.5	9.7	7.3	4.8
15-year loan [2]	20.6	13.7	10.3	6.9
10-year loan [3]	32.0	21.3	16.0	10.7

[1] From table D-2, line 2.
[2] From table D-3, line 2.
[3] From table D-2, line 4.

Thus, to lower repayments for a $10,000 loan to less than 10 percent of income in the years immediately following college, when incomes may be in the $7,500 range, requires that loans extend for at least 30 years. Under present loan terms of 10 years, even a zero percent interest rate will not achieve this standard.

The NSLB proposal provides for a rising schedule of repayments as well. Therefore, if a typical $10,000 borrower were to achieve an annual average income of $15,000, his annual repayment never need exceed about 5 percent of his income. *It should be made clear that the NSLB provides for a fixed (so much per year) schedule of repayments. The tables showing the repayment obligation as a percent of income are for illustrative purposes only.*

Advantages to Borrowers

From the point of view of the borrower, a loan from the National Student Loan Bank confers the following advantages over what would be available in private market borrowing.

1. Loans will be available at all times, regardless of money market conditions, to all eligible students. (Not necessarily available now because of fixed interest rate limit for present guarantee loan program.)

2. The loan will bear no interest charge to the borrower during enrollment or military service. The value of this postponement provision on a 30-year loan for a student borrowing a total of $10,000 in 4 equal sums is $1,337. That is, at 6 percent interest, a $10,000 loan, with postponement of repayment until the fifth year, contains an implicit grant to the student, the present value of which is $1,337. (Present legislation limits the postponement of interest to certain categories of borrowers.)

3. In addition, the borrower receives a form of insurance against very low earnings from the bank. That is, he may become eligible for a limited cancellation of repayment in the event his income falls

below the bank's minimum. Although such cancellations are limited to 10 percent of annual repayments, the value to the borrower will depend on his subjective assessment of whether he is likely to be eligible for cancellation and on the importance he attaches to the reduced risk of borrowing which such cancellation make possible.

4. Present Federal student loan programs do not permit extended payment for long periods. The National Student Loan Bank does. Thus, for those students willing to borrow for long periods, but not willing to borrow for shorter terms and pay the much higher annual payments required, the bank offers provision for a loan where no provision now exists.

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